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GUEST EDITORIAL

Tetanus Is A Preventable Disease

AT A RECENT conference on traumatic injury at the University of Virginia considerable interest was shown in the prevention of tetanus. During the course of a panel discussion it became evident that uncertainty existed in regard to some aspects of the problem. Tetanus has caused 125 deaths in Virginia during the past ten years. The tragedy of this disease lies not so much in its relative frequency as a cause of death but in the fact that these deaths result from a disease which can be prevented. This topic is editorialized not because some new form of prophylaxis has come to light but rather to urge more universal application of active immunization with tetanus toxoid, a well known, simple and readily available preventive measure.

The spores of *Clostridium tetani* are widely distributed in both rural and urban environments. The organisms are saprophytes and require tissue injury, either mechanical, thermal, or chemical, in order to survive, multiply and produce toxin. The clinical manifestations of the disease are the result of the absorption and action of the toxin which has been produced in the local wound.

The prevention of tetanus is based on adequate and competent surgical care. This is the *sine qua non* of wound therapy, to be supplemented, under conditions to be pointed out later, by the use of either specific antitoxin (passive immunization) or toxoid (active immunization). The value of chemotherapeutic and antibiotic agents in preventing tetanus in man is not known.

The prophylactic value of antitoxin was demonstrated in World War I. The passive immunity provided is prompt but transitory. Its use carries the risk of hypersensitivity reactions to foreign protein, the incidence, inconvenience and even danger of which should not be underestimated. Whenever the administration of antitoxin is contemplated precautions to prevent or to minimize allergic phenomena must be exercised.

Although the efficacy of prophylactic antitoxin has been proven, examples of its failure to prevent tetanus have been reported. Moreover, there is some debate relative to the effective dosage of antitoxin. There are some who challenge the time-honored 1500-unit prophylactic dose and who contend that amounts as high as 20 thousand units ought to be used. It has been shown that the 1500-unit dose gives passive immunity lasting from one to three weeks while larger doses offer protection for considerably longer periods.

Whether or not to give antitoxin to the individual not previously immunized by toxoid (see below) is one of the most perplexing questions confronting the surgeon called upon to treat the patient with a fresh wound. We are aware that many wounds, even severe ones, go untreated and tetanus does not occur. We also know that tetanus may be initiated in wounds of trivial nature. There are no dependable clinical or laboratory guides to aid in the selection of individuals for prophylaxis. If antitoxin is administered to every patient with an accidental wound many will be subjected needlessly to

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the risks of allergic reactions. If this precaution is omitted routinely, and no other form of prophylaxis is substituted for it, the patient faces the possibility of what may be a fatal disease. After careful consideration of the relative risks it would seem that antitoxin is the lesser of the two evils. Therefore, it is recommended that all patients not previously actively immunized by toxoid whose wounds are sufficiently serious to require any form of surgical care be protected against tetanus by the use of 1500-units of antitoxin. There may be, of course, occasional instances in which exceptions to this practice, either the omission or the increase of dosage, are indicated.

The uncertainty and debate in regard to the administration of antitoxin need not exist for there is available a safe and more dependable method of prophylaxis which, if universally employed, will eliminate this disease. Experience with tetanus toxoid in World War II is well documented and has established its indisputable value in the prophylaxis of tetanus.

Tetanus toxoid produces active immunization without risk of serious allergic phenomena. An individual who has been immunized properly is prepared so that at a subsequent time another dose will raise very promptly the titre of antitoxin in his serum to a level capable of protecting him from tetanus. An adequate method of immunization consists of two intramuscular injections of 0.5 cc of alum precipitated toxoid at intervals of four to eight weeks followed by another injection of 0.5 cc one year later. The alum precipitated toxoid is considered more effective for active immunization but for the stimulating dose the plain (fluid) toxoid (0.5 to 1 cc) is preferred since the response of the immunized patient to it is more rapid than it is with the alum precipitated toxoid.

The duration of the ability to respond to the stimulating injection is not known. A number of reports place it at a minimum of three to five years and one observer has found that a stimulating dose of toxoid administered as long as nine years after the basic immunization is capable of producing a titre of antitoxin sufficient for protection. It is possible that this ability to respond to the stimulating dose exists throughout life but one cannot rely on this as a probability. Until further information is obtained, it is safer to think and to act in terms of the three to five year effective period.

A patient previously immunized with toxoid who incurs a fresh wound, or in whom an old wound is surgically revised, should receive a stimulating dose of tetanus toxoid. As has been pointed out this affords safe and effective prophylaxis against tetanus and there exists no debate concerning the propriety of using it.

Unfortunately a large segment of our population, including many exposed to frequent injury, has not been actively immunized against tetanus. It is the duty of the medical profession, individually and collectively, to correct this deficiency. This can be accomplished if every child is actively immunized early in life and if the immunity is maintained by subsequent stimulating injections. Until universal childhood immunization is accomplished, efforts must be directed also at the adult population, especially those in hazardous occupations. This is a formidable but worth-while task and it is an aspect of preventive medicine well adapted to the efforts of the individual practicing physician.

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REHABILITATION OF THE TUBERCULOUS PATIENT*

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and
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Although the value of the use of physical agents in the treatment of disease and injury has been known as far back as early history, it is only during the last decade that the young specialty, Physical Medicine and Rehabilitation, has become widely accepted. The phenomenal growth of this specialty during the past ten years has resulted from the increasing need for scientific treatment of disabilities. Sulfa drugs, antibiotics, advances in anesthesia and surgery are saving lives but are producing an aging population and a population in which the percentage of disabilities is rising. In addition, as our cost of living increases and the interest rates go downward, medical rehabilitation of the individual becomes imperative for personal economic survival. Man must work longer in order to prepare for his extended years.

A number of you have already come in contact with a recent law of Congress, an extension of the Social Security Act, the so-called aid to the total and permanently disabled. If you have not, rest assured that the majority of you will be called upon by the Department of Public Welfare for information about your indigent disabled patients, and the question which you will face is a determination of the medical rehabilitation feasibilities for each of these patients. In other words, is your patient suffering from a disability which will, in reasonable likelihood, respond to medical rehabilitation treatment? The present trend in our social laws make it imperative that we as physicians not only treat disease but become aware of the limiting effects of disabilities and the possibility of restoration of function.

The concept of medical rehabilitation in the complete treatment of tuberculosis is not new, nor is the criteria on which to base the efficiency of this treatment new. As early as 1908, Dr. A. M. Forester originated the Eudowood Farm Colony, in Maryland, where patients were transferred after sanatorium treatment. In discussing the activity of Eudowood Farms, the following statement is of major significance: "The infrequency of relapse soon convinced them that the plan was being carried out carefully."[1] We realize that to mention a reactivation rate in discussing tuberculosis is to invite argumentative discussion. However, it is our opinion that the reactivation rate in tuberculosis without rehabilitation approaches the least figure of approximately thirty per cent.[1,2,3,4,5] A control, but short duration study by one of us, BBB, showed a reactivation rate of only 16.5 per cent for those who availed themselves of maximum rehabilitation treatment, thereby receiving a classification of "arrest" upon discharge from the rehabilitation center.[2] In a pamphlet of the National Tuberculosis Association, titled, "Clinical Evaluation of the Rehabilitation of the Tuberculous," which is based upon the experience of Altro Workshop from 1915 to 1939, we find this statement, "These data demonstrate that workers who achieve full work tolerance at the workshop and are graduated into general industry have a favorable record of health during their post Altro employment."[3] Dr. Keiffer, in his recent book, "Present Concepts of Rehabilitation in Tuberculosis", devotes a chapter to the statistical study of rehabilitation. These studies indicate that medical rehabilitation, as a part of the complete treatment of tuberculosis, lessens reactivation and that the investment of time and money in this form of treatment returns handsome dividends.[1] Although medical rehabilitation begins during the treatment of the active phase of tuberculosis, for the purpose of this paper, we wish to limit our discussion to that phase of rehabil-

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itation which is normally carried out in a specialized rehabilitation center, and to bring to your attention the excellent facilities for the rehabilitation of the tuberculous patient afforded by our own state of Virginia.

Criteria for the admission to the various Tuberculosis Rehabilitation Centers in the United States follow a general pattern. Practically all these centers require that the patient be free from active disease. Criteria for the admission to the Veterans Administration Tuberculosis Rehabilitation Center at Swannanoa, N.C., (a part of the Veterans Administration Hospital, Oteen, N.C.) are that the patient must have reached the so-called "quiescent" classification as given in the diagnostic standards of the National Tuberculosis Association. They must have no evidence of cavitation and their sputum must be negative for acid fast bacillus for at least four to six months prior to admission.[2] In addition to the above, the Virginia State Rehabilitation Center, the Woodrow Wilson Rehabilitation Center, Fishersville, Virginia, requires that the patient must have at least a four hour work tolerance. You will note that these criteria do not preclude the patient receiving pneumothorax or pneumoperitoneum while in the center. In fact, at both the Veterans Administration Center as Swannanoa, N.C., and the Woodrow Wilson Center at Fishersville, Virginia, patients are followed by chest specialists and are given air injections according to their needs.

The concept of activities of the Tuberculosis Rehabilitation Center is based on the premises that the long accepted method of "walking exercises" is not an entirely adequate means of determining work tolerance, since such exercise alone makes it difficult to determine objectively a particular patient's capacity to work or study in a specific field following discharge. On the surface, it would appear that the activities of a Tuberculosis Rehabilitation Center deal primarily with the hardening process and the determination of vocational aptitudes and abilities. However, there is under the surface and running throughout the center's stay, a purposeful teaching procedure which has as its objective teaching the patient the art of living following a severe debilitating disease. Patients are taught the signs of fatigue, that rest must become a part of their daily life, and that emotional stresses are of major importance. If some of our patients are to remain well, they must learn a new way of life. They must change some of their basic personality patterns. Among the clues which we look for in determining personality patterns are the lack of self-discipline which militates against the patient's leading a life of moderation and regular habits. Lack of ambitions and failure to select or even desire a goal which frequently leads to emotional and financial insecurity and consequently immoderation, and on the credible, but none the less, the risky side are over ambition and abundance of inner drive which often produces too intense an effort towards resuming normal work and living. The latter traits are often found in the so-called "good patient", and for them the toning down of ambition is as important as the creation of goals for others.[2] In summary, the techniques of rehabilitating the tuberculous patient fall under the heading of controlled environment and teaching the patient to live again. Although controlled environment in itself hastens complete recovery, it is used in a rehabilitation center as much for teaching the patient how to live again as for the purpose of hastening recovery. Patients are required to take prescribed periods of rest each day. Their respiration and pulse are taken before and after a work experience. Should the respiration and pulse show a sharp rise, it is indicative both to the therapist and to the patient that he is exceeding fatigue limits. The ex-tuberculous patients must learn that a steady flow of work within fatigue limits assists in maintaining the healed process but that peak loads of work are dangerous. Daily temperatures are taken and recorded. Weekly weights are taken and recorded. Our patients soon learn that fatigue is to be avoided and rest is imperative. Vocationally, patients are placed in a class or work experience where their aptitudes and abilities are carefully tested and evalued. Experience has taught us that by gradually increasing the patient's work tolerance over a period of four to six months, he will have hardened to such an extent that he can actively engage in from four to six hours of normal employment or classes per day without fatigue. He has learned how to evalue himself, and when, and under what conditions he can increase his hours of activity.

As we stated earlier in this paper, one of our objectives was to acquaint you with the excellent facilities of vocational rehabilitation afforded by the Woodrow Wilson Rehabilitation Center. There

are certain differences between the Veterans Administration Rehabilitation Center at Swannanoa, N.C., and the Woodrow Wilson Center at Fishersville, Virginia, which should be pointed out here. Patients are transferred to Swannanoa, N.C., as soon as they meet the requirements mentioned before; therefore, they are transferred directly from one of the other Veterans Administration hospitals before they have developed more than one or two hours of work tolerance. This means that the patient is under direct medical supervision from the time of admission for acute disease to the time of discharge following the rehabilitation treatment and training. It is after this that the ex-patient pursues training in a school or work situation. As you can see from the above, the Veterans Administration Rehabilitation Center is primarily a hospital with certain training facilities added which have as their objective hardening the patient, teaching him a new way of life and determining his vocational aptitudes and interests. In contra distinction to this, the Woodrow Wilson Rehabilitation Center at Fishersville, Virginia, is primarily a vocational school with certain medical facilities added. According to law, an applicant to Woodrow Wilson must be capable of four hours work tolerance in addition to the other criteria. Because of the pressure for bed utilization in the Tuberculous Sanatoria in the State of Virginia, this means that patients are required to remain at home for a varying length of time between being discharged from one of our sanatoria and meeting the requirements for admission to Woodrow Wilson. It is our opinion, based upon a wide experience in dealing with these matters, that this is an extremely critical period, a period in which the patients so frequently react with over caution and thereby lose their drive for self-sufficiency, or react with complete abandonment of precaution, only to be followed by reactivation and further hospitalization. We could cite many cases coming under both these classifications. When, and if, arrangements could be made for this interim care between hospital discharge and entry into Woodrow Wilson, we are of the opinion that such care would be a profitable investment.

The Woodrow Wilson Rehabilitation Center is for the purpose of vocationally rehabilitating any white citizen of the state suffering from any type of disability needing vocational training to become employable. There are other facilities for colored. If medical treatment is needed, it can be purchased by the State Rehabilitation Service from private sources or will be furnished while undergoing training at the center. The medical services there are under the able direction of Dr. Herbert W. Park, a specialist in Physical Medicine and Rehabilitation.

From November 1, 1947, to September 25, 1951, there have been 67 ex-tuberculous cases enrolled at the Woodrow Wilson Center with 23 of the number at present engaged in such courses as clerk-typist, stenographic, small business management, watch repair, shoe repair, radio, cosmetology, barbering and electrical appliance repair. During the fiscal year 1951, the State Vocational Rehabilitation Service closed out 114 ex-tuberculous cases as rehabilitated.

Although the largest number of cases presented to the State Vocational Rehabilitation Service coming from a single unit are referred by the State Welfare Department, it is to be remembered that cases can be referred by any interested parties. We recommend that when you, as active practicing physicians, see a case presenting a disability which you feel could be made employable by vocational training, with or without medical attention, that you inform the person of the facilities available through the State Vocational Rehabilitation Service. This service maintains ten branch offices in the state. They are located in the following cities: Richmond, Alexandria, Charlottesville, Lynchburg, Marion, Norfolk, Roanoke, St. Paul, South Boston and Winchester. We asked Mr. Corbett Reedy, State Supervisor of Vocational Rehabilitation, to give us each step in the handling of a client. The following is quoted from a letter which we received from him. He selected as a representative case a client who had suffered from tuberculosis and resided at Virginia Beach.

Step 1. Client X was referred to the Norfolk office of the State Vocational Rehabilitation (Mr. Ed Justice, Supervisor) by the Welfare Department of Virginia Beach. This case could have been referred by any private practitioner or other interested party.

Step 2. Client visited at home by field supervisor who finds man at home unemployable, on four hours rest per day schedule following recent discharge from tuberculosis hospital. Preliminary survey reveals man, head of the family, who cannot return to former job as carpenter. Family dependent upon Public Assistance grant.

Step 3. Medical information secured. General

medical information provided by family physician. Report secured from tuberculosis hospital. Up-to-date specialists examination secured and record brought up to date.

Step 4. Counsellor interviews client in detail, including testing, and obtains information concerning education, work history, family status, economic resources, vocational interest, and the like. Client and supervisor agree on a tentative work objective—that of furniture repair and upholstery.

Step 5. Counsellor communicates with chest specialist to get advice and consent concerning work objective and training plans.

Step 6. Supervisor writes Rehabilitation plan, recommending twelve months training at Woodrow Wilson Rehabilitation Center, four hours daily at first with hours increased as physician permits. Patient to receive pneumothorax refills and monthly checkup by chest specialist.

Step 7. Training authorized and client admitted to the Woodrow Wilson Center. After brief program of orientation, client enters training. Full medical reports accompany client becoming a part of the medical records used by the center physician who gives general health supervision to all students. Hours of rest rigidly enforced. Counselling interviews at frequent periods.

Step 8. Completion of training. Client is pronounced arrested. Can work eight hours a day. Returns home and local rehabilitation supervisor assists him in finding job consistent with training. Often employment has been pre-arranged.

Step 9. Placement follow-up. Case closed as rehabilitated after three months successful demonstration of work capacity.

In summarizing, we would like to emphasize that tuberculosis, like other prolonged disease processes, leaves our patient with certain limiting disabilities that respond favorably to Physical Medicine and Rehabilitation, that time and money invested in rehabilitation returns good dividends and that the citizens of the Commonwealth can be justly proud of the rehabilitation which is afforded by the Woodrow Wilson Rehabilitation Center.

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DISCUSSION

DR. WILLIAM F. WAGNER, Director Division of Tuberculosis Control, Virginia State Department of Health, Richmond: In my opinion, Drs. Dawson's and Bagby's excellent paper points up among other things the important role that correct patient management plays during a very critical period of tuberculosis treatment—between the time the patient is no longer in need of sanatorium care as such, and the point where his disease has become sufficiently healed to permit him to undertake formal definitive vocational training upon a four to eight hour per diem basis, *or* to return to his former job, *or* to embark upon an equally agreeable occupation for which he is already professionally qualified.

For years, many *needless* "relapses" have been reported and continue to occur because patients who have earned a right, *in* a sanatorium, to anticipate, *following* discharge, regular increments of physical and other exercise involving expenditure of energy, are *not* as carefully supervised as they should be by a physician during this period. Supervision is necessary to make sure that at no time do patients exceed basic residual treatment requirements consisting primarily of concomitantly reduced, but still vitally important, periods of systemic *rest.* During much of this period, *much* more rest is needed, and closer medical supervision, than is ordinarily found at full-blown rehabilitation centers, such as Woodrow Wilson. For this reason, sanatorium dischargees, in need of vocational training, are not suitable for direct transfer.

Having one's pursuits during leisure hours systematically controlled and/or purposefully directed does not, of course, in and of itself, spell "rehabilitation". Only when the supervised pursuit, in the sanatorium or following discharge, is *specifically* directed at preparing a man to earn his living in a *definite occupation* more nearly in line with an anticipated permanent partial disability can the term "rehabilitation", in the *restricted,* and *most widely used,* sense of "vocational readjustment" be said to apply.

The State of Virginia does not now provide facilities for care of patients when they reach this important interim treatment period between eligibility for discharge and eligibility for a full-fledged rehabilitation program, or job. As a consequence, when no longer in need of sanatorium care, patients customarily are discharged to their homes, the same as are patients discharged to their homes from the tuberculosis wing of the McGuire Hospital

when they become eligible for transfer to Swannanoa, *but decline to accept placement.* Actual date of discharge naturally varies considerably with the character of home conditions as well as with the condition of the patient.

By relieving sanatoria of those no longer in need of sanatorium care, badly needed beds are made available for the reception of new applicants. It is the feeling of the State Health Department that priority of consideration must continue to be given in our sanatoria to patients in need of *sanatorium treatment* as opposed to "interim care". Apparently this conviction is shared by the Veterans Administration with respect to its own tuberculosis wards at McGuire, Oteen, etc.

This does *not* mean that the State Health Department does not recognize the *existing* need for services of the type now provided at Swannanoa, nor that it denies that that need undoubtedly will continue to prevail when our presently envisaged sanatorium expansion program has been completed. By that time, however, we *hope, first* things having been taken care of *first,* that money will have been appropriated for the construction, equipment and staffing of a separate interim treatment unit patterned closely after the one you have heard described this morning.

In the meantime, every effort will continue to be made to encourage and to help secure closer medical supervision *in local communities* for sanatorium dischargees regardless as to whether they be candidates for later rehabilitation, or whether they expect eventually to return to previous employment. This is a normal phase of the State's over-all Tuberculosis Control Program.

Nor does prior concern with sanatorium treatment for those in need, mean that in-patient guidance and prevocational instruction will not be incorporated into plans and programs of existing State Sanatoria. They *will* be. Blue Ridge is now remodeling one of its buildings for this purpose. It is expected that Piedmont and Catawba will shortly follow suit.

Floral Eponym

Grindelia

Grindel, David Hieronymus, Ph.D., M.D., 1777-1836.

Dr. Grindel was born on September 29, 1777 near Riga, the son of a merchant. He was educated at Riga, Jena, and Dorpat. He held various teaching positions in chemistry, botany and pharmacy in these universities. Finally, he held the position of professor of medicine at Riga where he was also district physician. He died January 8, 1836.

Grindelia is a genus of some 30 resinous herbs from the western United States. It is sometimes called gum plant or tar weed. The leaves and tops of *G. camporum, G. humilis, or G. squarrosa* contain an amorphous resin that is used in cough medicine.

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A NEW TECHNIQUE FOR RADIATION IN CARCINOMA OF THE CERVIX *

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To gynecologist and radiologist both, the treatment of carcinoma of the cervix is often a frustrating experience. The tumor arises in an organ readily accesible to direct inspection and to biopsy, and therefore early cases are being seen with ever greater frequency. It is a growth of moderate sensitivity and the primary cervical lesion can be cured in a high percentage of cases. It is not our intention to debate whether the treatment of choice is radical surgery or radiation, nor whether radiation should be delivered to the cervix by radium or intravaginal roentgen therapy. For our purpose, it is sufficient to recall that in non-operated cases, the primary growth occasionally is not sterilized because of unusually high radio-resistance. In the vast majority of instances, the cervix is sterilized but the tumor survives in points beyond the cervix which have not been reached by an adequate dose of radiation. Experience has shown that 6000 r tumor dose delivered in six weeks constitutes a control dosage for a high percentage of squamous cell carcinomas. The comparative ease with which a control dosage can be delivered to the cervix with successful clinical result makes it all the more frustrating to lose patient after patient because a control dosage has not been delivered to the pelvic nodes.

Gilbert H. Fletcher, of the M. D. Anderson Hospital for Cancer Research at Houston, Texas, in June, 1949, described a technique for pelvic irradiation which, in our opinion, makes obsolete the common practice of employing four or six 10 x 10 or 10 x 15 cm. portals (two anterior, two posterior, and perhaps two lateral) for radiation of pelvic cancer.

We have been using his technique for a year. Neither we nor he can yet offer any statistical analysis of results, but the advantages of his approach seem to us so obvious that we wish to commend it to you.

As Fletcher points out, the average width of the bony pelvis at the level of the attachment of the parametrium is about 12 cm. Two fields 10 cm. wide at the skin surface cover an area about 25 cm. wide at the level of the parametrium when the focus-skin distance is 50 to 70 cm., throwing the periphery of the beam into the lateral iliac fossae. A 15 cm. long portal reaches above the sacral promontory. Though the pre-aortic nodes are sometimes the sites of metastasis, it is practically impossible to deliver a dose in the order of 6000 r in six weeks to this area and, therefore, inclusion of the area in the field of radiation is of questionable wisdom. More important, when 10 x 10 or 10 x 15 cm. portals are employed anteriorly, contact with the anterior superior iliac spines and the symphysis pubis prevents compression of soft tissues. Similarly, when the large portals are used posteriorly, the upper sacrum blocks soft tissue compression.

These objections Fletcher meets by using small cones and multiple small skin portals, the beams of radiation being directed so as to deliver a nearly homogenous depth dose to the entire intrapelvic tissues. He has been able to approach the desired 6000 r depth dose within six weeks while producing less severe systemic reaction and seldom more than a moist desquamation of the skin which heals in four to six weeks. We have been able to do the same.

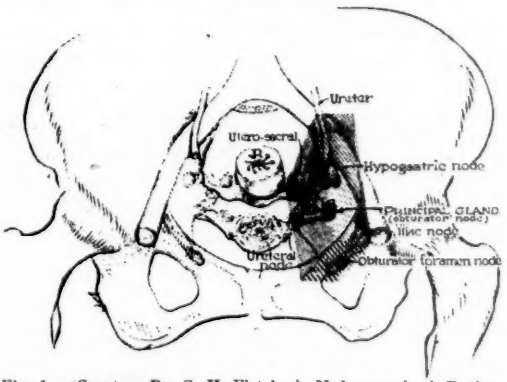

Fig. 1.—(Courtesy Dr. G. H. Fletcher) Node area in A P view.

*From the Department of Roentgenology, University of Virginia School of Medicine and Hospital, Charlottesville, Va.

Read at the annual meeting of The Medical Society of Virginia at Virginia Beach, October 7-10, 1951.

Anatomically, the bloc of tissue to be irradiated in cancer of the cervix (Figure 1) consists of the broad- and uterosacral ligaments, and the four main groups of lymph nodes along the course of lymphatic spread on the pelvic wall. These nodes are the hypogastric, at the bifurcation of the common iliacs; the external iliac nodes along the pelvic brim; the nodes close to the obturator foramen; and the "principal gland" or obturator node on the lateral pelvic wall, halfway between the hypogastric nodes and the obturator foramen. The most lateral, the "principal gland", lies about 5 cm. from the midline at the level of the internal os. In each half of the pelvis (Figure 2), the

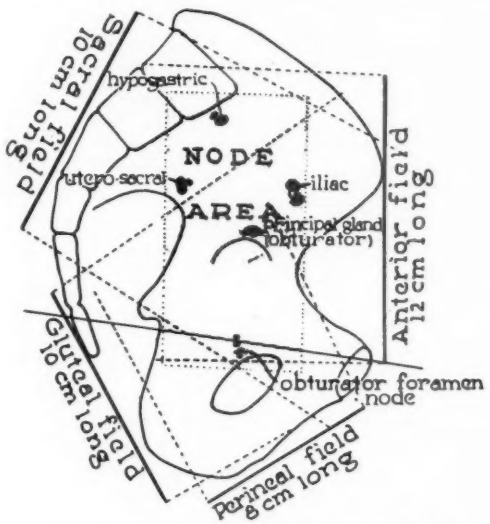

Fig. 2.—(Courtesy Dr. G. H. Fletcher) Node area in lateral view.

tissue bloc constitutes a cuboid about 5 to 6 cm. wide, 5 to 7 cm. deep, and 10 cm. in height.

To achieve homogeneous radiation of these two blocs of tissue, ten portals are employed, five on each side of the pelvis. Two anterior portals 8 x 12 cm. in size and separated by 2 cm. at the midline are arranged without angulation, the lower margin of the portals being as low as possible without impingement upon the pelvic bone. Posteriorly they are arranged as shown (Figure 3), three on each side. The sacral portal, about 6 x 10 cm. in size, is given an average tilt of 20 degrees toward the feet with the lower margin of the portal 2.5 cm. above the sacrococcygeal joint. The gluteal portal, also about 6 x 10 cm. in size, is generally tilted 35 degrees toward the head with the upper margin at the sacrococcygeal joint. A sciatic portal of about 4 x 12 cm. is angled mesially about 40 degrees. The exact portal sizes and angulation vary with the size of the patient, her surface contours, and the position of the cervix. The cervix must be located with the patient in both prone and supine positions before the portals are selected. If the cervix is not in the midline in either position, the portals must be shifted accordingly. The perineal portals, averaging 7 x 4 cm. in size, are placed lateral to the vulva in apposition to the skin surface and with no tilt. If the vagina is extensively involved, a medial tilt to converge on the vault is useful.

To return to Figure 2, we see that this arrangement of portals comes very close to producing homogeneous radiation of the tissue bloc which should receive a cancer control dosage. Homogeneity is achieved by giving the largest air dose through the sacral and sciatic portals, the next largest air dose through the anterior portals, and the smallest through the gluteal and perineal portals. In smaller patients whose skin tolerates radiation well, it is often possible to omit

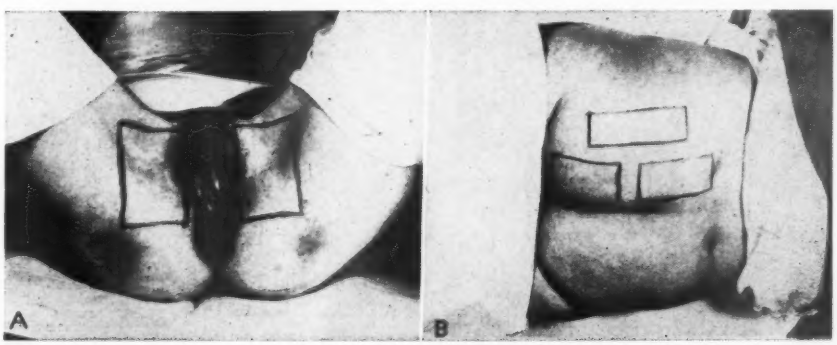

Fig. 3.—(Courtesy Dr. G. H. Fletcher) Perineal and posterior portals.

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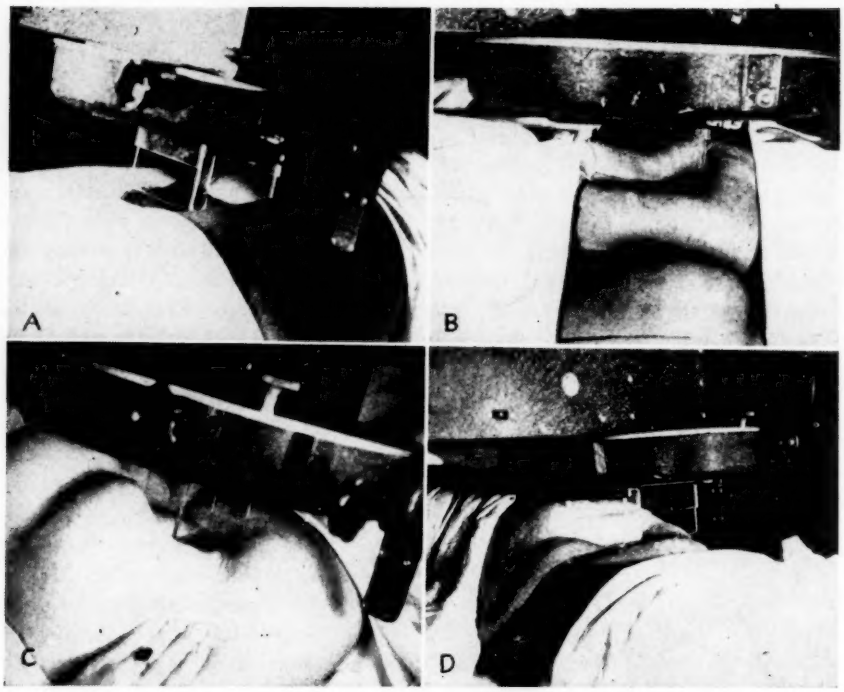

Fig. 4.—(Courtesy Dr. G. H. Fletcher) Soft tissue compression with small cones.

either the perineal or sciatic portals anteriorly, and sometimes to omit both.

The next figure, Figure 4, demonstrates a great advantage of the small portals and treatment cones. Except in the perineal and sacral portals, the cones can be advanced 2 to 6 cm. toward the tissue bloc by compression of soft parts. Obviously, the more obese the patient, the greater the advantage. The increased depth dose obtained by compression fully compensates for the reduction in depth dose produced by the reduction of portal size. For the same integral dose, the same portals with compression (Figure 5) give a higher tumor dose than the usual 10 x 10 cm. or 10 x 15 cm. portals. The skin and underlying viscera are spared and the constitutional reaction is reduced. Furthermore, it is possible to deliver a larger total daily dosage. Whereas, through conventional portals, 400 r. divided between two portals is about as much as a patient can tolerate, through the small portals 600 r. divided between two portals is tolerated nicely.

This same treatment plan can be modified to meet

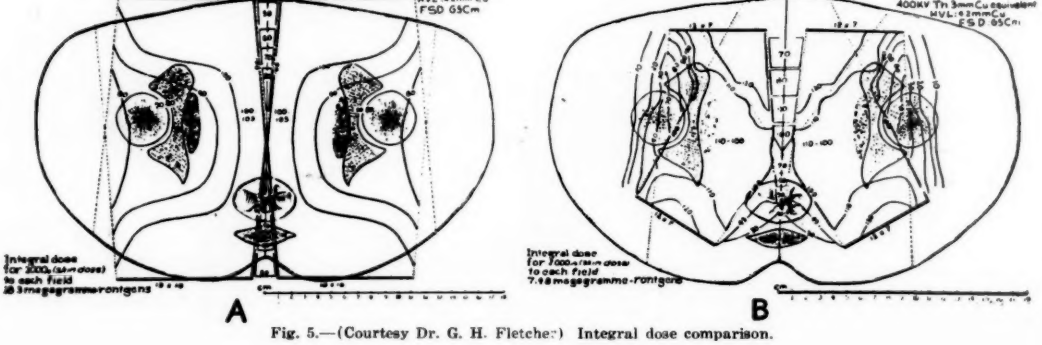

Fig. 5.—(Courtesy Dr. G. H. Fletcher) Integral dose comparison.

varying conditions encountered in carcinoma of the cervix and other pelvic cancers. The portals and angles are rearranged for treatment of cervical cancer that is producing extensive midline tissue destruction or hemorrhage, for adenocarcinoma of the endometrium, and for ovarian cancer. Those interested are referred to Fletcher's original article.

Summary

Fletcher has presented a carefully thought-out, logical plan of radiation therapy for pelvic cancer which we have found especially useful in the treatment of carcinoma of the cervix. Its advantages are so obvious that we do not believe there is any need to await statistical results before adopting it.

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Reports Successful Treatment of Trachoma with Sulfonamides.

The successful use of the newer sulfonamides in the treatment of trachoma was reported in the Feb. 23 Journal of the American Medical Association.

These drugs should "stand first in therapeutic choice because of their relative mildness of action and apparent specificity against the trachoma virus," in the opinion of Dr. Arthur A. Siniscal of Rolla, Mo., medical director of the Missouri Trachoma Hospital. Dr. Siniscal based his conclusions on the outcome of treatment of 3,500 patients suffering from the affliction observed at the hospital from 1941-1951. Some of the earlier sulfonamides were discarded for various reasons.

In addition to various sulfonamide therapies, the patients were subjected to many of the new antibiotic drugs. The antibiotics, according to Dr. Siniscal, proved of value in combating secondary infections associated with trachoma, but had no effect on trachoma, itself.

Hospital treatment, the report said, was threefold: (1) eye drops containing a sulfa compound were administered every two hours for from 10 days to three weeks; (2) sulfonamides were administered internally by means of tablets four times a day for the first seven days, and (3) the eye was coated overnight with a sulfa compound ointment during the entire period of treatment.

When secondary infections were present, surface applications of antibiotic solutions were used. Dr. Siniscal pointed out that systemic injections of antibiotics were not given because the drugs do not produce sufficient measurable concentrations in the eye to be of benefit.

XUM

CONTEMPORARY CONCEPTS IN THE DIAGNOSIS AND MANAGEMENT OF EPILEPSY†

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The true incidence of epilepsy has been difficult to determine. Lennox[1] has estimated that there are about ten million epileptics in the world and only about 300,000 are receiving treatment. Based on figures determined by the frequency of epilepsy among World War I draftees, the incidence is given as .5% or 1 in 200 persons of the general population.[2] In the United States, therefore, there are probably 700,000 to 800,000 patients with epilepsy. This illness constitutes about 10% of this country's neuro-psychiatric burden[1]. Thus, numerically at least, epilepsy should be as important to the physician in general practice as is active tuberculosis or diabetes.

Although interest in epilepsy has been widespread since antiquity and excellent observations and descriptions of this condition may be found in the earliest recorded medical writings[3], the modern day understanding really began with the work of John Hughlings Jackson[4,5]. Indeed, most research during the past two decades and notably the work of Penfield[6,7,8,9,10,11] and his co-workers has confirmed many of Jackson's early theories with regard to epilepsy. The introduction and development of new types of electronic equipment for the study and investigation of the electrical phenomena of the nervous system has stimulated world-wide interest in experimental neurophysiology and clinical studies of epilepsy. Since an understanding of epilepsy is of great importance in the general practice of medicine, it seems worthwhile to present briefly some of the contemporary concepts in its diagnosis and management.

During the past fifteen years there have been many efforts to facilitate diagnosis and understanding of epilepsy by various types of classification. Because epilepsy is not a disease entity but rather a symptom complex or syndrome the classifications have been based on many and varied factors. New classifications[8,9,11,12,13,14] are being constantly introduced and older classifications revised in an attempt to stay abreast of the newest developments. The pioneering efforts of Lennox and Gibbs[15,16,17] and their co-workers have for many years been the standard classification. A little later Penfield[6] and Jasper[18,19] and their co-workers presented their classifications based mainly on the very intensive investigation of a large group of patients who have been operated upon neurosurgically and who have had exhaustive studies clinically and electroencephalographically both before and after operations. In addition, detailed observations made following electrical stimulation of the brain and electrographic recordings during operation have warranted many conclusions given in their classifications. It is not my intention to present any critical evaluation of the many classifications now extant, nor do I wish to further confuse the issue by any new attempt at classification. It might perhaps be useful to attempt to correlate as much as possible the most recent contributions of Penfield[7,8,9,10,11], Jasper[7,20,21], Lennox[22,23], and Gibbs[24,25,26] and their many co-workers. Since any understanding of epilepsy is inextricably tied up with an understanding of the electroencephalographic correlates, the important electroencephalographic findings will be presented in a separate table. With reference to this last statement I should like to re-emphasize a suggestion that I have made in a previous publication[27], namely, that any attempt at diagnosis and management of epilepsy without electroencephalography will be as ineffective as would be the diagnosis and management of pulmonary tuberculosis without x-ray studies or heart disease without electrocardiography or diabetes without blood and urine studies. This in no way diminishes the importance of adequate and detailed history and clinical studies, including physical, neurological, psychiatric and other laboratory examinations. Indeed, the diagnosis of epilepsy must be based primarily on an adequate and detailed clinical investigation of the patient.

Very briefly and simply stated, the basis for the Penfield classification[7,8,9,10,11] is an attempt to categorize the various epileptic seizure patterns according to the origin of the focus of the epileptic dis-

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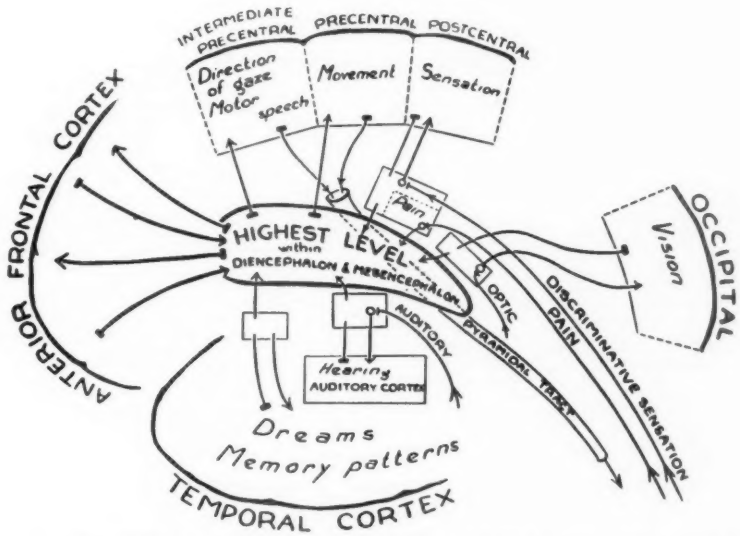
†Read before the annual meeting of The Medical Society of Virginia at Virginia Beach, October 7-10, 1951.

charge. An epileptic seizure is defined as "a state produced by intense discharge of ganglion cells within the grey matter of the brain"[11] and, if all of the conditions which are capable of producing such discharges in the grey matter are grouped together, they may be called "the epilepsies"[8]. Whether such a discharge remains localized or spreads by contiguity to adjacent areas or by projection tracts to distant areas will determine the pattern of the epileptic seizure. Since an alteration of or a loss of consciousness is a fundamental component of many epileptic seizures it has been necessary to determine a probable center or seat of consciousness. Based on good experimental and clinical studies, such a region is believed by Penfield and Jasper to exist in the higher brain stem (diencephalon and mesencephalon). "This region of the brain is 'highest' in the scale of functional integration, the final representation of sensory and motor function"[7]. Hence the region is known as the "highest level" (diagram 1). This area is accessible by neuronal pathways to all areas of the cortex. Thus, discharges may be conducted to this area from various portions of the cortex or may originate in this area. In either case a discharge of sufficient intensity will produce a major convulsive seizure. When the movements are generalized at once without turning of the head to one side or the other, the attack is called "grand mal" or a major type of the highest level seizure. This should be differentiated from attacks that have a focal origin in the cortex. When the discharge originating in the highest level is of less intensity, there is only a loss or alteration of consciousness without generalized convulsive movements. This is the classical "petit mal". The electroencephalographic correlate of this type of seizure is the bilaterally synchronous three per second wave and spike discharges.

Diagram 1



Schematic diagram to illustrate the functional relationship (not anatomical details) between various cortical areas and the highest level. Penfield and Jasper (7).

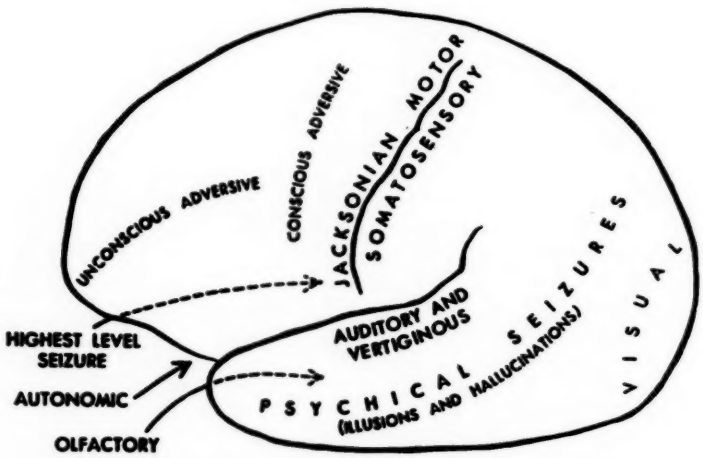
Penfield[11] suggests that the category of idiopathic or genetic epilepsy be limited to the major and minor seizures occurring at the highest level. The various functional areas of the cortex as determined by Penfield is presented in diagram 2. The functions of these areas have been determined by many and varied investigations including the electrical stimulation of the brain during operation.

In Table 1 is presented the four categories into which epileptic seizure patterns may be placed according to the focus of the epileptic discharge. In

Table 2 the electroencephalographic correlates for these various patterns are presented. The broken vertical line in both tables separates the Penfield and Jasper classifications from the Lennox and Gibbs classifications. An attempt has been made to place the comparable diagnoses of the two classifications at equivalent levels. The justification for this grouping in some instances may be questioned. The limitations of time will not allow complete discussion of these tables nor is it necessary to give detailed descriptions of the many well-established clinical categories. Some of the new concepts deserve comment.

DIAGRAM 2

Penfield and Rasmussen (10)



Seizure patterns. Highest level seizure begins with "petit mal" or loss of consciousness without lateralization; it arises in the diencephalon; unconscious adversive begins with loss of consciousness and turning to opposite side; conscious adversive begins with turning, without loss of consciousness, and without sensory aura; Jacksonian motor begins with somatic movement; autonomic begins in diencephalon but abdominal (gastrointestinal) aura in island of Reil. Psychical seizures include perceptual illusions, hallucinations, dreams, and memorics. Other types are selt-evident. Minor subdivisions omitted.

During the past five years there have been a plethora of communications on so-called psychomotor epilepsy and its relation to the temporal lobe[22,24,25,28,29,30,31,32]. To some extent the interest was stimulated by the findings of focal electroencephalographic activity in the temporal lobes in psychomotor epilepsy and in the facilitation of the determination of such foci by EEG recordings during sleep. Also, the electrical stimulation and studies of the temporal lobe during neurosurgical operations have made possible much of the new knowledge. Indeed, in recent years attempts to treat psychomotor epilepsy by the surgical removal of portions of the temporal lobes, especially the anterior pole, have been reported by several investigators[20,31,32]. Lennox[22] in a recent publication has suggested a psychomotor triad (Tables 1 and 2, No. 3) and states that the term "temporal epilepsy" will probably soon replace the older terminology. It is important to point out that temporal lobe seizures may at times be confused clinically with petit mal attacks or petit mal status. The differential diagnosis is facilitated electroencephalographically by the finding of temporal lobe foci in the former condition and the characteristic bilaterally synchronous three per second spike and wave activity in the latter condition. In Tables 1 and 2 it will be seen that petit mal of the highest level seizures (II b) is the equivalent of petit mal (pykno-epilepsy, 6a) of the petit mal triad of Lennox

Table 1

Classification of Epileptic Seizures

Probable Etiology	I. Focal Cortical Seizures (Focus in Cerebral Cortex)	
	Various Localizations and Patterns	
	a. Jacksonian Motor	1. Jacksonian 2. Focal Convulsion
	b. Somatosensory	
	c. Auditory and Vertiginous	
	d. Psychical	
Acquired		3. Psychomotor Triad (Temporal Epilepsy) a. Psychomotor b. Automatic c. Subjective (Psychic) Seizures
	e. Visual	
	f. Others	
	II. Highest Level Seizures (Focus Probably in Higher Brain Stem—Diencephalon, Mesencephalon)	4. Autonomic (Thalamic and Hypothalamic Epilepsy)
	(Idiopathic Epilepsy)	
Genetic	a. Major Seizures ("Grand Mal")	5. Grand Mal
	b. Minor Seizures—Petit Mal	6. Petit Mal Triad a. Petit Mal (Pykno-epilepsy)
	III. Myoclonic Seizures (Focus Lower Brain Stem and Spinal Cord)	b. Myoclonic Jerks c. Akinetic
	IV. Cerebral Seizures (Unlocalized)	7. Other Types
Genetic and/or Acquired	a. 1. Incompletely Analyzed Cases	a. 1. Congenital Defects
	2. Diffuse Brain Disease	2. Encephalitis
	b. Extra Cerebral	b. General Conditions
	1. Systemic Disease	c. Stokes-Adams Syndrome
	2. Metabolic Disease (Hypoglycemia)	d. Carotid Sinus Sensitivity
	3. Toxemia of Pregnancy	e. Others
	4. Uremia	
	5. Hyperpyrexia	
	6. Others	
	(Based on Penfield,	Lennox and Gibbs)

and Gibbs. Williams[12] suggests the term "juvenile petit mal" for this seizure type. It should be differentiated clinically, electroencephalographically, and etiologically from the myoclonic jerks and akinetic seizures of the petit mal triad. Gibbs and Gibbs[26] have recently described another form of epilepsy which they call thalamic and hypothalamic epilepsy (Tables 1 and 2, No. 4). They state that this condition may at times be confused with psychomotor epilepsy and other epileptic syndromes. Clinically the condition is characterized by attacks of pain, rage and vegetative symptoms. Electroencephalographically, 14 and 6 per second positive spike discharges are recorded during sleep, appearing bilaterally, and are independent in each hemisphere. The condition is relatively infrequent, occurring in only 6% of patients with a clinical history of epileptiform disorders.

In the present composite classification the probable etiologic considerations are not presented in detail. The major categories of genetic (idiopathic) and acquired (symptomatic) etiology or a combination of the two is shown. It must be emphasized that such separation is quite arbitrary and the present consensus of most workers indicates that probably both factors contribute in most patients but to a varying degree[33]. Statistically, Lennox has shown in a study of a large series of clinic and private patients that in over 75% of all cases there is no history of antecedent disease or evidence of organic factors. Williams in England[12] suggests the possibility that there is a dual inheritance of the state of epilepsy, an

Table 2

CLASSIFICATION OF EPILEPTIC SEIZURES—EEG FINDINGS

Probable Etiology		
Acquired	I. FOCAL CORTICAL SEIZURES a. Superficial Cortical Convexity Random spikes, localized unilateral. Relatively normal activity from other head regions.	1. Jacksonian 2. Focal Convulsion 3. Psychomotor Triad.
Acquired	b. Buried Cortical Foci Random sharp waves, 2-6 per second. Paroxysmal rhythms more diffuse unilateral or bilateral from homologous areas of the two hemispheres. Background rhythms relatively normal from other areas.	Generalized high voltage slow waves or temporal spikes. In monopolar sleep recordings generalized positive spikes and a negative spike focus in one or both temporal areas.
Genetic	II. HIGHEST LEVEL SEIZURES (IDIOPATHIC EPILEPSY) Various forms of projected disturbance, usually rhythmic sharp and slow waves, usually bilaterally synchronous from homologous areas. Background activity often disturbed periodically.	4. Thalamic and Hypothalamic Epilepsy. 14 and 6 per second positive spikes usually bilaterally in sleep recordings.
Genetic	a. Major Seizures ("Grand Mal") Often same as for petit mal between attacks but with more prominent spike components. May also show diffuse "fast" or "multiple spike" activity in paroxysms.	5. Grand Mal
Genetic	b. Petit Mal Bilaterally synchronous spike and wave at 3 per second. Relatively normal activity between attacks.	6. Petit Mal Triad a. Petit Mal (Pykno-epilepsy) Generalized high voltage "dart and dome" at 3 per second.
Genetic and/or Acquired	III. MYOCLONIC SEIZURES Bilaterally synchronous multiple spike and slow wave discharges maximum over frontal lobes occurring in short paroxysms not regularly repeated in rhythmic sequence.	b. Myoclonic Jerks Single petit mal "dart and dome". c. Akinetic High voltage 2 per second waves or slow spike and wave frequently localized.
Genetic and/or Acquired	IV. CEREBRAL SEIZURES Diffuse Cortical Random slow and sharp waves, occasional rhythmic sequences. Considerable independence of two hemispheres. Little or no normal activity in background.	7. Other Types

(Based on Penfield, Jasper, Lennox and Gibbs)

epileptic factor and a limiting or anti-epileptic factor. Based on extensive studies of post-traumatic epilepsy plus evidence from other sources, he suggests that a hereditary constitutional factor not only predisposes a person to epilepsy but helps to determine the form the epilepsy will take. "It is potent and predisposing to symptomatic epilepsy whether due to injury, infection or tumour, as well as in initiating idiopathic epilepsy". He indicates that after trauma to the brain the failure of the anti-epileptic factor to prevent the spread of the epileptic state permits the creation of an epileptic brain. When the anti-epileptic factor is effective it prevents larval attacks from disturbing consciousness and behaviour.

Although to some extent the age of onset of seizures may give presumptive evidence of the cause of the seizures the final proof of the etiologic determinants must be based on a careful appraisal of each patient clinically and electroencephalograpically. Penfield[8] has pointed out that presumptive causes for seizures beginning at various age levels are as follows: infancy (0-2 years)—birth injury, degeneration, congenital defects; childhood (2-10 years)—birth injury, febrile thrombosis, trauma, or idiopathic; adolescence (10-20 years)—idiopathic or trauma; youth (20-35 years)—trauma or neoplasm; middle age (35-55 years)—neoplasm, trauma and arteriosclerosis; senescence (55-70 years)—arteriosclerosis and neoplasm. Recent evidence of many investigators, both pediatricians[34,35] and electroencephalographers[36], indicates

that convulsions in infancy and early childhood must be carefully studied clinically and electroencephalographically before idiopathic epilepsy can be ruled out. The incidence of convulsive disorders in children's clinic and hospital admissions varies from 1 to 7%. In a three year period at the Children's Clinic of the Johns Hopkins Hospital, Bridge[34] has reported that convulsive disorders were the most frequent of five major pediatric problems. It occurred twice as frequently as rheumatic fever. Although it is true that convulsions with high fever, the so-called "simple febrile convulsions", are relatively common in children below three years of age and represent about one-third of the cases of convulsions below this age level, it is important to point out that Bridge, in a study of 742 children with proven epilepsy, reports that the first seizure occured before three years of age in 50% of the cases. Convulsions with fever may also be due to acute brain disease, such as meningitis and encephalitis, cerebral vascular accidents complicating common infectious diseases, and occasionally to brain abscess or cerebritis associated with acute otitis and mastoiditis. Margaret Lennox[36], in a careful study clinically and electroencephalographically of 153 children with febrile convulsions and 52 children with idiopathic epilepsy whose initial convulsion occurred with fever, has shown clearly that abnormal electroencephalograms occurred in 45% of the first group and that febrile convulsions may be the beginning of idiopathic epilepsy. She recommended that children who have febrile convulsions be studied electroencephalographically within one week after the convulsion, a month later, and again at 5 or 6 years of age.

The management of epilepsy to be completely adequate must consider four important aspects: psychological, pharmacological, surgical (where indicated), and sociological. Recent studies[37,38,39,40] are more and more reaffirming the importance of the psychological handling of patients with epilepsy. Whether or not one is willing to accept all of the psychodynamic concepts which have been suggested as to the significance of epilepsy, there is no doubt that emotional factors play a significant role in the precipitation and control of seizures. The myth of the epileptic personality has been exploded, but the importance of seizures in personality development and psychological adjustment cannot be too strongly emphasized. Indeed, on occasions, more intensive psychotherapeutic measures than the usual supportive psychological therapy may be needed before an individual case is adequately managed. The differential diagnosis between psychogenic and epileptic seizures may at times be difficult, especially when such seizures are accompanied by an apparently normal routine electroencephalogram. With modern activation techniques,[28,41,42,43,44] however, abnormalities will appear in the electroencephalogram in almost all patients with epilepsy. Hypnosis[40] has recently been found to be a valuable tool in differentiating between psychogenic and epileptic seizures, the differentiation being based on whether or not the patient under hypnosis could recall the details of his seizure.

With reference to the pharmacological management of epilepsy, I shall not attempt to discuss all of the important drugs and their proper dosages. This has been well documented in the literature[2,45,46,47,48,49,52]. In spite of the extensive research by many laboratories and the experimental use of many new types of medications, the truly ideal anti-convulsant has not yet been discovered. For all of the favorable effects of the drugs most commonly used there are toxic complications in many instances. The severity of this toxicity varies with the individual drug. The proper choice and dosage of the drugs available is still in a large measure a question of trial and error. In order to obtain the maximum cooperation of patients in therapy, it is well to be quite frank with the patient with reference to trial and error procedure and anticipate the need for proper change in drugs or dosage. In view of the excellent correlation that has been made by many investigators of the success of specific drugs correlated with specific types of seizures, as determined electroencephalographically, much time and expense may be saved by employing first the type of drug that has proven most effective in a specific type of seizure. In general, it might be stated that the drugs should preferably be used singly, but, if necessary, in combination with gradual increase in dosage until attacks are either fully controlled or toxic symptoms appear. Too frequently a specific drug may be considered ineffective only because there was a failure to employ adequate dosage.

The safest drugs are still phenobarbital and Dilantin (sodium diphenylhydantoinate)[46,48,50]. The lowest incidence of blood dyscrasia has been reported with these drugs. According to many investigators, Dilantin alone or in combination with phenobarbital

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has proven quite effective in all types of epilepsy with the exception of minor seizures of the highest level type or petit mal epilepsy. For the latter condition, in my experience, the drug of choice has been Paradione (paramethadione). This drug is similar to Tridione (trimethadione) but less toxic. Tridione and Mesantoin (methylphenyl-ethyl-hydantoin) have a wide popularity and are undoubtedly quite effective in some cases but nevertheless must be considered as dangerous medications[50]. Although it is recommended that frequent blood studies be performed and adequate records kept of such studies in all patients receiving anti-convulsant therapy, and especially with the more toxic drugs, recent evidence[48] indicates that such procedures may provide the physician with a false sense of security in preventing the morbidity or mortality of blood dyscrasias. When toxic manifestations are evidenced by blood studies it is recommended that such studies be continued after the drug is stopped to detect any depression of the bone marrow. Recent surveys[50,51,52] have reported varying numbers of fatalities in the literature due presumably to anti-convulsant medication. In one survey[51] three deaths were reported from Mesantoin, three from Tridione and one from Phenurone. In another survey[50] nine deaths have been reported from Tridione and six from Mesantoin. Six deaths have been reported from Phenurone[52]. Four of the Phenurone deaths[49,52,53] were due to hepatitis and two were due to aplastic anemia[52,54,55].

The newest anti-convulsant drug that has been made available on the open market is Phenurone (phenylacetylurea); it was released last month (September 1951). This drug has been used experimentally for about four years. Although there has been some variation in its evaluation by many investigators[48,49,52,53,54,55,56,57,58,59,60,61,62] the drug has been released with appropriate caution as to its important toxic manifestations which include psychic disturbance, gastro-intestinal symptoms, rash, drowsiness, headache, hepatitis and blood changes (leukopenia, aplastic anemia). Most important are the personality changes which occur in approximately 17% of patients receiving the drug. The psychiatric disturbances are usually decreased interest in surroundings, depression, and suicidal tendencies. In addition to monthly blood studies, the urine should be examined for urobilinogen to determine the presence of pathological amounts which appear before clinical signs of liver damage. My own experience with Phenurone has been with a small experimental group of seven patients who have been carefully selected and followed clinically and electroencephalographically during the past three years. The drug was furnished through the courtesy of the Abbott Laboratories. The results are as tabulated in Table 3. All patients had been previously treated with a variety of medications without success. During the investigation all the patients received only Phenurone. All the patients were adults varying in age from 21 to 49 years of age. Improvement as shown in the table of 50% for temporal lobe seizures and 40% for combined major seizures and temporal lobe seizures is considerably lower than the favorable results reported in larger series of cases by other investigators. In one report[52] which evaluates the results in a composite group of 1,539 cases, about 70% of the patients with psychomotor seizures alone or in combination with other types of seizures were improved with Phenurone.

A very important and practical issue to the general physician treating a patient with epilepsy pharmacologically is the determination of criteria for discontinuance of drug therapy. Although the improvement in clinical seizures and electroencephalography do not necessarily follow a parallel course, the correlation is usually good except that the improvement in the EEG record lags behind the improvement

Table 3
PHENURONE
(Phenylacetylurea)

Diagnosis	*Number of Cases*	*Controlled*	*Improved*	*Unimproved*	*Toxic*	*Percent Improved*
Temporal Lobe Seizures	2	1	0	1	0	50%
Major Seizures and Temporal Lobe Seizures	5	1	1	1	2	40%

in clinical seizures. Discontinuance of medication is certainly safer if the electroencephalogram has shown improvement and the patient has been free of clinical seizures for an adequate length of time. Too often we have seen patients who have been maintained on drug therapy for many years longer than necessary. The physician managing the patient without the adjunct of electroencephalography has been reluctant to discontinue medication for fear that seizures would reappear.

In a numerically small number of patients who are not controlled by an adequate trial on intensive therapy with various combinations of medications and who show a consistent localization of a discharging focus as determined clinically, electroencephalographically and pneumographically, neurosurgical removal of the focus may be attempted. This may be done if the focus is in a location where removal is feasible without increasing the patient's disability. Penfield[8] has reported that in suitable patients surgical removal is justifiable in any area of the cortex except the arm and leg area of the precentral gyrus and the essential speech area of the dominant hemisphere. He states that complete or practical freedom from attacks can be promised in 56% of cases of surgical excision at present[8]. Because of the extreme complexity and unusual skill required in making such localizations as well as the unusual skill required in the actual surgical technique, there are comparatively few centers throughout the world equipped for such surgery. Penfield and Erikson[6] have reported 22.5% cases cured and another 22.5% greatly improved in a group of 165 patients by resection of the cicatrix and epileptogenic focus. The operative mortality was 3.8%. Penfield and Steelman[63] reported on 26 cases of post-traumatic epilepsy of which 13 cases or 50% were cured or markedly improved by cortical excision. Walker[64], in a report of 40 cases of post-traumatic epilepsy, states that for one year after operation one-third of the cases of cortical excision had no further attacks and another one-fifth had only one attack or the aura of their attacks. Bailey[30], Penfield[31], and Morris[32] have published recent reports on the value of surgical excision for temporal lobe seizures. With proper selection of these cases about 50% of the patients will show improvement.

The last but not least important aspect in the management of epilepsy is the proper handling of the sociological implications of the patient's illness. These considerations include the work and social adjustment as well as the complications related to marriage and children. Lennox[65,66,67] has written extensively in this regard. There is still considerable prejudice and many misconceptions both among physicians and laymen alike related to epilepsy. Great efforts are being made in public enlightenment by such organizations as the National Epilepsy League, Inc.[68], but it is fundamentally the duty and the responsibility of the physician treating the patient to assist social workers and other interested individuals and agencies in the rehabilitation of the patient and the adequate handling of his sociological difficulties.

Summary

1. The incidence of epilepsy and its importance in the general practice of medicine is reported.
2. A brief resume of the concept of epileptic seizure patterns as presented by Penfield and Jasper and their co-workers is discussed.
3. A composite classification based on the important contemporary concepts in the diagnosis of epilepsy is presented.
4. The significant EEG correlates of the epilepsies are given.
5. The importance of electroencephalography in the diagnosis and management of the epilepsies is stressed.
6. New observations with reference to temporal lobe seizures are presented.
7. The new syndrome of thalamic and hypothalamic epilepsy as recently described by Gibbs and Gibbs is discussed.
8. The importance of adequate study clinically and electroencephalographically of febrile convulsions in infancy and childhood is stressed.
9. The management of epilepsy must include the psychological, pharmacological, surgical (where indicated) and sociological aspects.
10. The general use of drugs is discussed in the management of epilepsy.
11. Dangerous complications and fatalities reported with anti-epileptic drugs are discussed.
12. Phenurone, the newest anti-convulsant drug, is evaluated and a report of the personal results in a small experimental group of patients is given.

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XUM

ACNE—A FIFTY YEAR REVIEW*

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The problem of acne is the unhappiness of adolescence. There is no crippling nor mortality, yet, if one agrees with Mr. Jefferson, it cannot be underrated, for he states the pursuit of happiness is of equal importance to life and liberty. The problem in essence is not the lack of professional ability but being allowed to exercise that ability to the fullest. The minds of parents are so overloaded with folklore and the profession so wedded to worn out theories which do not produce results, one has to argue and plead for a scientific and practical treatment that the unhappy boy or girl may be given their chance for happiness.

In this problem there are two frustrations. First, the frustrated girl or boy who is callously told, "There is nothing which can be done; you must outgrow it." This is simply not so, and the poor adolescents are abandoned to their own adolescent guidance. Second, the frustration of the dermatologist who can do a good job if given a green light, but is met by impossible demands for perfection, time and expense.

There is a cruelty in ignoring acne. There is no bumpy-faced girl who, if she had the choice, would not prefer a broken leg or an abdominal operation. The elder of the presenters of this paper has time and again after the first lecture on acne had some student with his face deeply scarred say to him, "You think you know what you are talking about," pointing to his face, "but until you have gone through the crucifixion of an acne persecuted adolescence, you don't know the half of it."

Maybe we do not know the half of it, but because something must be done and given carte blanche as to method and time, the results in acne compare favorably with the results in other fields of medicine, we feel a review covering fifty years of acne is worthwhile. Be it said, the procedures reported are not from medical literature, but those things used and appraised by this speaker through all this time.

*Read before the annual meeting of The Medical Society of Virginia, at Virginia Beach, October 7-10, 1951.

CHRONOLOGICAL REVIEW

1901 to 1915	Sulphur locally Mechanical cleansing (opening pustules, removing comedones) Care of the scalp Tonic medication (iron) Dietary and elimination supervision Vaccine therapy
1915 to 1925	Sulphur locally Mechanical cleansing Care of scalp Tonic medication Dietary supervision X-ray coming in Ultra violet coming in Vaccine less employed
1925 to 1935	Sulphur locally Mechanical cleansing Care of scalp Vaccine abandoned Diet less impressed Tonic a minor factor X-ray generally used Thyroid therapy (Sutton) Liver therapy in deep pustulation Ultra violet generally used Hormone therapy experimental
1935 to 1951	Sulphur locally Mechanical cleansing Scalp care Diet less stressed X-ray as a standard Ultra violet less used Liver therapy Vitamin A Thyroid and tonic (only in recognized deficiency) Antibiotics Hormone therapy increasing

So we see that according to accepted dematological practice, three things only have continued through this time as dependable: The local use of sulphur, the removal of comedones and draining of abscesses with the treatment of the scalp for the usual coexistent seborrhoea.

Since its introduction, x-ray has proved itself a standard technique. Ultra violet has faded because

of its transient and unpredictable behavior. This is to be expected because there are many cases of acne helped by sun exposure but also many acnes date from sunburn, particularly on chest and shoulders.

Hormone therapy looms large in the future.

Worn out ideas linger long with those whose thoughts are not primarily confined to the subject in hand. Long after the profession has abandoned what they once believed, the laity still carries on and parents are so convinced of what is now folklore that it prevents a modern approach:

First—that blackheads are due to dirt and a soap scrubbing is all that is necessary.

Second—that acne is due to an improper diet which, if corrected, all will be well.

Third—acne is a symptomatic reaction to other troubles and not a distinct pathological entity.

What is acne? A change takes place in the nature of the sebum. There are inflammatory reactions at the mouth of the sebaceous follicle and by oxidation the formation of the comedone. This forms a cyst with retained skin bacteria. Later on these break down the sebum into pus. The comedone is evacuated and the lesion heals with cicatrization.

The first steps in this syndrome are still mysterious but it is certain that other factors can accentuate a process already started. This is particularly true of iodine and bromine and the patient should be directed to avoid bromide sedatives and the use of iodized salt in their foods.

There must be a chief cause and modern research seems to be closing in on Androgen, the male hormone, as the first factor, but more of this later.

How anything acts which increases acne is not too well understood, but the fact is admitted and a new word is coined for the occasion—Acnogenic.

Always foods have been regarded as acnogenic and it is a controversial subject. Sulzberger in the Year Book for 1949 makes this statement—"In acne it is not known whether such foods act as allergans or whether they exert their undesirable action by some other mechanism. However, whatever the mechanism of food aggravation of acne vulgaris, the fact has been established that the available skin tests are useless for finding the offending foods."

One gets weary of following worn out paths with no visible help and the elder of the presenters of this paper is now convinced that foods have no effect in acne except in their fat content which overburdens the fat metabolism. Chocolate, for instance, has always been considered a chief offender, but chocolate is a heavy fat and the same harm can be done by French fried potatoes or a dish of vanilla ice cream. He is convinced there is nothing specific about the effect of foods, nothing remotely related to the processes of allergy.

Regarding acne as symptomatic of focal infection is an illusion. In any crippled children's hospital will be found a sick and wasted adolescent without a pimple on his face and there are few football squads which do not have some young giant among them who is at the apex of physical perfection and his face a mass of acne pustules.

Yet we have seen tonsils, teeth, and even appendices removed not because of their essential pathology but because of a hope that when this was done the acne, the main disturber, would leave.

There is a deep and infiltrating type of acne called variously—acne indurata, acne conglobata or cystic acne. Certain men have actually thought of this as a tuberculid and treated with rest and forced feeding. We have seen too many cases in the physically robust to agree to this but these are the cases where our best help has come from concentrated liver therapy, using the ten unit product hypodermically along with x-ray.

The general use of x-ray in acne dates from 1918, when George Miller McKee published his classic work, "X-ray and Radium in the Treatment of Diseases of the Skin." He established the boundaries of safety and laid down certain rules of procedure not only for men but for machines—mathematical formulae which, if obeyed, made the therapy without hazard. The chief warning was the avoiding of production of erythema. Much observation proved that if erythema from any cause, such as intercurrent sunburn or local applications, was avoided, the treatment was without hazard and enormously helpful. But why the insistence on x-ray in acne? Because it is the only treatment which has any effect on the problem of relapse. Acne is a relapsing disease and the patient who receives x-ray is usually better three months after stopping than while treatment is going on. No other therapy has this virtue.

This paper is a review of fifty years and in the first twenty years x-ray was not used. A conscientious review of these eras convinces us that x-ray properly used is an infinitely better technique than

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anything that went before. Not to have used it would have been neglect.

It is not defensive but merely a statement of fact to say that the objections to the use of x-ray in acne do not come from the trained dermatologist or radiologist in the main but from those who in their lives have never laid their hands on the handle of an x-ray machine.

We feel forced into this statement because a constantly recurring patient statement, "My physician is opposed to x-ray because he fears scarring." Now the scarring referred to is pitting. X-ray damage is atrophy with telangectasia and never pitting. The pitting in acne is due to acne necrotic processes and pitting is prevented, not accentuated, by x-ray. Where there has been hypertrophic scarring as in the conglobata type, x-ray is the only thing which will reduce it. We have checked our records since 1921, and we find that we have treated over twenty-six hundred cases of acne, seven hundred and fifty-one receiving x-ray before 1941. The usual treatment has been 75R given unfiltered once a week for eight weeks. In many cases this has been repeated after a year of rest. So we have had ample opportunity to run into trouble and observe it if trouble should occur.

It would be impossible to contact all these cases for obvious reasons but we have seen very many as returned cases for other troubles. We have carefully examined a large number of such people, many after fifteen years or more, and have to date no single case of carcinoma or atrophy on the acne treated areas. There has been one case of a mild telangectasia of the nose which could be due to other causes. But this should be said, at no time have we varied the laws laid down by McKee, and, furthermore, the constant calibration and supervision of machines has been a routine procedure. The fear of an effect on sterility with the patient is too absurd to deserve consideration. At this date, x-ray is still the most decisive factor for good in acne therapy. Conservative men have advised that x-ray not be used before age sixteen. This is all right, if acne be controlled by other means, but it is fantastic to stand aside and let a child's face be butchered by acne because of a theoretical and unsubstantiated fear.

This is no discussion of the details of therapy but of the larger aspects of the problem. It is hard to avoid an attitude in x-ray which does not lay you open to the criticism of being a purist. But there is no other way. When right results follow a right technique, it is unintellectual to fear a treatment because there are cases where the technique has been bad. In such statements we feel we are voicing the opinions of two departments of medicine, dermatology and radiology, and not merely the opinions of two individuals.

Antibiotics are too new to properly evaluate. In the aggravated pustular phases penicillin sometimes helps but in other cases actually it seems to aggravate the lesions. Aureomycin or chloromycetin has given more dependable help.

Multiple vitamins have given us no help. On the other hand, vitamin A in large doses is decidedly worthwhile.

Looming large on the horizon is the use of sex hormones. The terms, man and woman, are relative and there is no such thing as a complete differentiation of sex. It has been said, "There is a buried female in every male and a buried male in every female", and it is the over-powering influence of androgen and estrogen which makes for the degree of differentiation of sex types. Hormone therapy has worked out well with girls and may be the future treatment. With boys it is still experimental. With girls hormones given for the mid two weeks of the menstrual cycle cause no functional upset and the effect on the acne is at times dramatic, particularly in the conglobata type. If any therapy will replace x-ray, hormone therapy is its most likely competition.

With no exact conclusions, it is now believed that there is a ratio of balance in the normal and there is a shift in the ratio of balance in the acne case. In confirmation of this is the very recent observations of acne appearing in pre-puberty cases after the administration of ACTH or cortisone.

Androgen and estrogen can be considered antagonistic in their action and, if androgen be adjudged the main acnogenic factor, then the use of estrogen in acne becomes logical.

There can be no doubt each decade has added to our ability to meet this problem. Profound bacteriological research has proved of no value and the effect of those things we do is not entirely understood. Sulphur is a poor antiseptic but its benefit is obvious. X-ray is of slight antiseptic value but its good effect

in superficial infections has been amply proven. It all boils down to this. Acne is a clinical problem and good results are obtained if those things are used which have proved of help by trial. To approach the case, dominated by a theory, is the road to failure.

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This book belonged to Dr. Howard A. Kelly.

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Astruc was born at Sauve, in Languedoc, in a Huguenot manse and baptised in a protestant church, but he never knew himself as other than a professed Roman Catholic. While he was a child his father abjured his Protestant faith, took to the profession of law and taught his two sons literature and philosophy. Jean studied medicine at Montpellier. He became professor of anatomy at Toulouse in 1710 and of medicine at Montpellier in 1716. About 1728 he moved to Paris. According to Ricci, Astruc was the first to use the term hydatid mole and the first to state its placental origin. He gave an accurate description of ectopic pregnancy. In 1736 he wrote the history of syphilis and venereal diseases. In 1753 he wrote "Conjectures sur les Mémoires originaux dont il parait que Moyse s'est servi pour composer le livre de la Genése." This was one of the early works on higher criticism of the Bible. He showed from internal evidence that Genesis is a commingling of at least three distinct accounts.

His works on obstetrics and the diseases of women were popular with early Americans and a list of the books of old Virginia doctors usually contains one or more Astruc items. In the preface of his *obstetrics* he makes the statement that he had never attended a woman in labor.

Astruc was well thought of by his contemporaries, but some theologians answered his criticism of the Bible with arguments *ad hominem.* Prof. Howard Osgood (1892) says that he was a profligate and the paramour of Madame de Tencin. Dr. Norman Moore, who presided over the section on the History of Medicine of the Royal Society of Medicine when Sir Alexander Simpson presented his paper on Jean Astruc, said that Astruc was much too busy to have been a profligate. Sir William Osler, who discussed the paper, said that Prof. Osgood's sources were "drawn from the bitter enemies of the Jesuites, with whom Astruc was associated."

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THE SILENT GALLSTONE: SIGNIFICANCE AND MANAGEMENT

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"It is never too late to give up our prejudices. No way of thinking or doing, however ancient, can be trusted without proof."—HENRY DAVID THOREAU.

INTRODUCTION

Usually a cholecystogram is done because of the suspicion of gallbladder disease based upon symptoms customarily associated with such pathology. When gallstones or a non-functioning gallbladder are discovered, and after a careful survey by roentgenological examination of the gastro-intestinal tract, general physical examination, laboratory study and consideration of the differential diagnosis of gallbladder disease, there are no other causes found for the symptoms, it is generally recommended that a cholecystectomy be performed.

At times during x-ray examination of the colon, stomach, or urinary tract, there is a visualization of radio-opaque stones (about 1/3 of gallstones are opaque) in the gallbladder. Under certain circumstances a cholecystogram is done as a routine part of a general diagnostic survey in the absence of symptoms directly attributable to the gallbladder. The findings of a non-functioning gallbladder or a gallbladder containing stones under these conditions then poses a therapeutic problem. Evaluation of the history may leave one with the conclusion that these gallstones are "silent". The problem of management in such cases cannot be simply stated and to properly manage such cases, the potential significance of the silent gallstone should be recognized, and the answers to certain questions are of great importance.

DISCUSSION OF BASIC PROBLEMS

The incidence of gallstones has a bearing on the problem of therapy. In 16,936 autopsies done at the Mayo Clinic, Robertson[1] found an incidence of 16.3% with gallstones of which 12.6% were males and 22.6% were females. In 61% of these cases there had apparently been no suspicion by the patients or by their attending physicians that gallstones were present. Obviously, after taking into consideration this source of error, it seems that the percentage of silent gallstones may well be high. As Comfort, Gray, and Wilson[2] point out, one is impressed not only with the large number of people with gallstones, but also with the large number of *silent* gallstones potentially present in the general population.

The mortality resulting from surgery of the gallbladder as *commonly* performed is a factor that will be of great importance in any decision regarding cholecystectomy for silent gallstones. Thompson[3] in a survey of 500 patients operated upon for gallbladder disease in a community hospital found an operative mortality of 4%. When this was broken down into two groups of 250 consecutive cases, the first having been operated in 1938-1941 and the second 1947-1949, there were 13 deaths in the first group and 6 deaths in the second group. The incidence of postoperative complication was 17%. The mortality in the acute cases treated surgically was 7% which was only slightly greater than the overall mortality of 4%. Comfort, Gray, and Wilson[2] at the Mayo Clinic stated that the mortality of cholecystectomy is about 0.5% in uncomplicated disease and 3% for complicated disease in the hands of an experienced surgeon. The overall picture is probably best described in the figures first quoted from the community hospital, and it is with figures such as these that I believe we should consider the advisability of surgery in gallbladder disease with the potential mortality of surgery in mind.

The results of surgery, once it has been successfully performed, are of decided interest when we consider committing a patient to surgery. Glenn[4] in a review of the results of cholecystectomy performed for cholelithiasis stated that the reports of successful results of cholecystectomy varied from 80-92% of patients with stones. At the New York Hospital his figures showed 84-86% successful results after a two year follow-up. Persistent symptoms were found to be due to three general groups of cases. One group may be classed as the failure to make a complete diagnosis, including unrecognized peptic ulcer, recurrent attacks of appendicitis, renal disease or cardiac damage. Common duct stone, long cystic duct remnant and stricture of the biliary ducts are

factors causing postoperative disability related in one way or another to the surgery itself. Then there is a third group in which the poor result is due to a dyskinesia of the sphincter of Oddi or pylorospasm. These three groups are all about equal in frequency and amount to about 5% each of the 15% poor postoperative results.

The potential complications of gallstone disease, their incidence and predictability bear strongly on the decision regarding cholecystectomy. In a cancer conscious medical profession and public it is essential that we consider cancer of the gallbladder. This causes about 6,500 deaths annually and is associated with gallstones in from 65-95% of the reported cases[5]. There are two important studies that are of value in this problem. Candler[6] in a survey of 315 cases of gallstone disease in the insane found only two associated cases of carcinoma of the gallbladder. Vadheim, Gray, and Dockerty[7] found that symptoms of disease of the biliary tract had been present in their 77 cases of primary carcinoma of the gallbladder for an average of 14.2 years in 80% of the patients. One might conclude from these figures that the chances of cancer developing or being present in association with silent gallstones is negligible and should not be an indication for surgery. However, Bockus[5] stated that the incidence of carcinoma of the gallbladder is somewhat less than formerly, perhaps because of the common practice of removing gallbladders. Certainly any method of prevention of carcinoma of the gallbladder that is feasible, should be considered, as the cure rate of carcinoma of the gallbladder is not more than 2.5%.

The development or presence of a common bile duct stone is a complication that is to be feared, but a report by Heyd[8] is of interest in this respect. In a study made of 1,270 cases, in which symptoms of gallstones had been present for two years or less, the incidence of stones in the common duct was 1.9%. In another group of patients in which the symptoms of cholecystic disease had been present for 10-25 years the incidence of stones in the common duct was 16%. The conclusion from this study, and from basic knowledge of the symptoms of common duct stone, would be that, so long as the stone remains silent the chance is slight that it is in the common duct.

Acute cholecystitis may occur at any time in the presence of stones, but with the improved surgical mortality rate of acute disease noted before and with an incidence of only 1.5% reported by Buxton, *et al.*,[9] acute cholecystitis is not an important factor in a consideration of *prophylactic* surgery.

The role of cholelithiasis in the development of acute and chronic pancreatitis has been repeatedly stressed by writers on the subject of pancreatitis. Pancreatitis must be borne in mind as a possible complication of cholelithiasis[5]. The common channel theory is considered to be important in the development of both gallbladder disease and pancreatitis. A common channel (of biliary and pancreatic ducts) is present in from 61-89% of cases[5], allowing under certain circumstances regurgitation of bile into the pancreatic ducts and pancreatic enzymes into the bile ducts and gallbladder with a mutual ill effect possibly resulting.

Prognosis of Silent Gallstones

With these studies as a background, we now can turn to the problem of what will happen to the patient with silent gallstones if no surgery is performed. There are two recent studies available that give us a statistical survey which we may utilize in deciding how likely the complications previously discussed may arise. Comfort, Gray, and Wilson[2] presented a long term follow up of 112 cases with silent gallstones found at the time of surgery for other conditions. In these 112 patients the following symptoms ultimately developed:

Colic	16
Indigestion	30
Jaundice and Colic	5

51 patients (45.5%) developing symptoms.

Of the 51 patients that developed symptoms, surgery was done in 24 with three deaths, resulting in a 12.5% mortality. Twenty-eight patients died of causes unrelated to the gallbladder disease. Blackford, Bird, and Casscells[10] reported non-operative results on patients with abnormal cholecystograms that were followed an average 6.5 years. These cases were not classified as to whether they were silent or symptomatic but apparently were the latter so apply only partially in this study of silent gallstones. Of 50 patients with stones in the gallbladder or nonfunction of the gallbladder there were 28 patients that had unsatisfactory results, being an incidence of 56% poor results under medical therapy. We can

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judge from these two studies that over one-half of the patients with abnormal cholecystograms and a slightly smaller percentage with silent gallstones found at the time of surgery will ultimately do poorly either from the symptomatic standpoint or by development of complications of gallbladder disease.

PREVIOUS OPINIONS

The surgical treatment of the silent gallstone has received a variety of opinions, of which the following are a few chosen examples. Musser[11] concluded in 1934 that "it is doubtful if interference is indicated for the first or even the second biliary colic if evidence of infection is lacking." Andrews[12] said in 1946, "I think the operation on silent gallstones is a scandal." White[13] in 1928 stated that "many silent gallstones show a gallbladder wall that is bacteriologically negative. Cholesterol stones especially lie dormant for years. Surgery should be based on symptoms, not on the mere presence of stones or low grade infection. I believe that most patients escape perceptible injury to other organs."

On the other hand, Lahey[14] in 1938 expressed the conviction that there are no harmless gallstones and because of the dangers of acute cholecystitis and biliary obstruction all gallstones should be removed. Carter, Green, and Twiss[15] said that "in every instance in which stones can be demonstrated to be present, surgery is indicated to prevent the dangers of acute ulcerative cholecystitis". Clute and Kenney[16] felt that "in the great majority of simple or silent gallstones an early elective cholecystectomy is wiser than an operation into which one is forced by the complications of the disease." It is of interest to consider a statement by Robertson[1] at this point. He stated that "Logically, if it is necessary to remove all gallstones, quiescent or symptom producing it is also desirable to test the gallbladders of all adults frequently, both by cholecystography and by searching clinical examinations, and if gallstones are found, to suggest immediate operative interference." There is considerable food for thought in this statement if one adopts an overall radical policy.

PRELIMINARY SUMMARY

Silent gallstones are present in a significantly large proportion of the population and constitute a problem of importance in the daily practice of medicine and surgery. The surgical mortality is about 4% in the average community hospital, and postoperative complications occur in about 17%. The late results of cholecystectomy are unsatisfactory in 15% of cases with cholelithiasis. The mortality in acute gallbladder disease is 7% in a community hospital. Follow-up studies show that about 50% of patients with silent gallstones develop symptoms eventually. The various complications of cholelithiasis have been briefly discussed with emphasis placed on the fact that symptoms of cholelithiasis are usually noted over a period of time before these complications arise. The wide variation in the opinion held by well known authorities is cited.

A METHOD OF APPROACH

It should be a fundamental concept that every patient presents an individual problem and hard and fast rules are liable to error or misinterpretation. Therefore, if gallstones are found and no symptoms are present, management should be individualized, keeping in mind that we know only a few of the generalities and have no knowledge of the specific outcome in the individual, and that our approach to similar local pathology may be modified by systemic disease or other factors.

There are certain local findings that might indicate a need for cholecystectomy. Those patients with a number of small calculi in a functioning gallbladder are usually susceptible to repeated attacks of colic and should be treated surgically. An example of variation in this principle would be in the patient with a hematological disorder often associated with gallstones, such as hemolytic anemia, sickle cell disease, etc. In such a patient the primary disorder should be treated with slight regard for the silent gallstones as the seriousness of the blood dyscrasia is the most important concern. In the patient with a gallbladder packed with stones, filling the gallbladder snugly, surgery should not be postponed because of the danger of erosion of the gallbladder wall leading to pericholecystic abscess, perforation of the gallbladder, or internal biliary fistulae.

It is obvious that the surgical risk should be considered carefully, keeping in mind not only the obvious factors of cardiac status, pulmonary function, etc., but also findings indicating an increased risk of pulmonary emboli, such as previous phlebitis or severe varicosities. There is another problem in the case with a borderline risk and that is the possibility that a disease not adding to the operative risk at

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present may reasonably by progression create a prohibitive risk in the unpredictable future. If a patient is likely to be in such a category surgery now might be considered as conservative.

Having in mind all of the above considerations the patient with silent gallstones may be told he has about an even chance that symptoms will develop. A lessened, but still significant risk is to be noted if surgery is done before complications develop or old age or physical disability occur, but the increase in risk is counter-balanced by the fact that if he defers surgery he may never require an operation. It is not possible on the basis of information now available to tell the patient whether the risk is greater or smaller if operation is performed while the gallstones are silent than if it is postponed until symptoms develop. It will be a low mortality in either case. Surgical treatment in a patient with silent gallstones otherwise in good condition may be classified as elective or optional surgery but intervention should not be postponed after symptoms and more especially after attacks of colic appear. A final consideration is the patient. We all know in our practices the maladjusted individuals who have "never felt well since *that operation*". If we can pick out such patients beforehand they are best treated with conservatism.

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New Books

Below are listed some of the newer books secured by the Tompkins-McCaw Library of the Medical College of Virginia, which are available to our readers under usual library rules:

Asthma Research Council—Physical exercise for asthma. 8th ed. 1949.

Boek and Boek—An Analysis of the Multi-Test Clinic of Richmond, Virginia, 1951.

Cuneo, H. M.—Brain tumors of childhood, 1952

Dublin, L. I.—The facts of life from birth to death. 1951.

Ecker—The normal cerebral angiogram. 1951.

Irvine, K. Neville—B C G Vaccination in theory and practice. 2nd ed. 1950.

Lepeschkin, E.—Modern electrocardiography. Vol. 1 P. Q. R. S. T. U. 1951.

Miller & Hyde—Gynecology in gynecological nursing. 2nd ed. 1949.

Rich, Arnold R.—Pathogenesis of tuberculosis. 2nd ed. 1950.

Schafer, Paul—Pathology in general surgery. 1950.

Soresby, Arnold—Genetics in ophthalmology. 1951.

Stevenson & Guthrie—History of otolaryngology. 1949.

White, Paul—Heart disease. 4th ed. 1951.

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CHANGING FASHIONS IN THE TREATMENT OF INFLUENZAL MENINGITIS*

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and
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The treatment of influenzal meningitis has progressed considerably during the past decade. With the advent of chemotherapy, the outlook changed from a hopeless one to a very favorable one. The purpose of this paper is to show our experience with this disease at the University of Virginia Hospital. Since the advent of type specific antiserum in 1940, we have treated a total of 36 cases of meningitis due to Hemophilus influenzae, type B.

SHOWING AGE INCIDENCE

Age	*No. of Cases*
under 6 mos.	7
6 mos. to 1 yr.	7
1 yr. to 2 yrs.	6
2 yrs. to 3 yrs.	7
3 yrs. to 4 yrs.	3
above 4 yrs.	2

Youngest—3 mos. Oldest—7 yrs.

Fig. 1.

Figure I shows the age incidence of this disease in our series of patients. This is important because many workers have shown that the prognosis is worse in those patients under one year of age. Twenty-seven of our patients were under three years of age and fourteen were less than one year of age.

The diagnosis was made by spinal fluid examination in all cases. Figure II shows the importance of careful direct smear examination. Pleomorphic organisms typical of influenzal bacilli were found in twenty-seven of the cases. Culture of the blood often proves to be quite helpful. Twenty-six of the patients had positive blood cultures. In thirty-one of the patients, culture of the spinal fluid was positive.

SHOWING NO. POS. BLOOD CULTURES, ETC.

Total No. of Cases	32
Positive Direct Smear	27
Positive Blood Culture	26

Fig. 2.

*Read before Spring Scientific Meeting of the Virginia Pediatric Society, May, 1951.

In the three patients with negative spinal fluid cultures, the blood cultures were positive.

Before the introduction of chemotherapy, the mortality rate of influenzal meningitis exceeded 95%. The mortality rate at the above hospital was 100%. With the discovery of the sulfonamide drugs and the advent of type specific antiserum, the treatment became more hopeful. At the present time the treatment is satisfactory and quite gratifying. There are several agents of definite value. Figure III enumerates the various therapeutic agents.

Alexander was one of the first investigators to use the sulfonamide drugs in the treatment of influenzal meningitis. She found they were of some value but that only in a very few cases could treatment be successful[1]. This has been our experience. Of six patients treated with one of the sulfonamides alone, all of them died. However, the course of the disease was definitely prolonged.

In May, of 1940, the first case of influenzal meningitis at the University of Virginia Hospital was treated with type specific antiserum. This was the first case ever to survive at the above hospital. The next 13 patients were treated with sufadiazine, serum and supportive measures. Three of the 13 patients died, giving a mortality rate of 23%. This mortality rate compares favorably with that of Alexander.[2] In a series of ninety patients treated with sufadiazine and antiserum, her mortality rate was 20%. Crook had a mortality rate of 23% in a series of 52 patients[3]. However, only 63% recovered without residuals.

In 1946, with the discovery of streptomycin, it was shown that this drug was effective *in vitro* and *in vivo* against Hemophilus influenzae. With the use of streptomycin alone, Alexander was able to cure 66% of twelve children so treated[4]. Alexander then advocated the use of a combination of sulfadiazine, serum, and streptomycin. With this method of treatment, 19 of 25 recovered completely. Three

Agents Used in Treatment of Influenzal Meningitis

Drug	*Dose*	*Route*	*Value*
Sulfadiazine	1-1½ gr. per lb. per day	orally, I. V.	unsatisfactory
Type specific antiserum	100 mgm.	I. V., S. Q.	+ + + +
Aureomycin	50-100 mgm per kilo per day	orally, I. V. if necessary	+ + +
Chloromycetin	100 mgm per kilo first 24 hrs. 50 mgm per kilo thereafter	rectally, orally I. V.	+ + + +
Terramycin	Value not established		
Streptomycin	40 mgm per kilo per day 50 mgm i. s.	intramus. intraspinal	+ + +
Penicillin	Of No Value At All		

Plus marks indicate degree of efficiency. Serum is preferably given in an intravenous drip; give 100 mgm. initially, and may give additional dose, depending upon the quelling test. If chloromycetin is given rectally, dose must be doubled.

Fig. 3.

died and three recovered with residuals[1]. Hodes and his co-workers treated 49 patients with the triad of drugs and noted a complete recovery in 65%, a fatality rate of 16%, and recovery with residuals in 19%. Seven of our patients were treated in this fashion and six recovered without residuals. There was one death, giving a mortality rate of 14.3%.

Woodward and his associates reported the use of aureomycin in seven cases of influenzal meningitis[5]. There were no deaths. Four patients in our series were treated with a combination of serum, aureomycin, and streptomycin. One of these, a four months old child moribund on admission with a temperature of 108.4 degrees, died. Two cases were treated with aureomycin and serum, and both recovered without residuals. Aureomycin is of definite value but it has the disadvantage of causing nausea, vomiting and diarrhea. It has also been shown that spinal fluid cultures may remain positive for as long as seven days[5].

Prather and Smith[6] reported the use of chloromycetin alone in the treatment of 15 cases of influenzal meningitis. There were no deaths. This drug has the advantages of diffusing rapidly into the spinal fluid, and of being relatively non-toxic. It sterilizes the spinal fluid in 24 to 48 hours. It can be given orally, intravenously, or rectally. There is need but for two lumbar punctures, one for diagnosis and one prior to discharge. We have treated eight patients with chloromycetin and serum. One died, giving a mortality rate of 12.5%.

We are of the opinion that chloromycetin and serum is the treatment of choice at the present time. We know by past experience that serum will cure the great majority of cases. Certainly, serum seemed to be the common denominator in our 36 cases. We have not had to contend with any serious reactions to serum. Chloramphenicol is almost non-toxic, is easy to give, and has been shown to be very efficacious. However, from our experience, we advise against the discontinuance of antiserum at this time.

The complications of influenzal meningitis were rather frequent among our patients. Figure IV lists these. Otitis media was by far the most frequent. Penicillin is of real value in the management of the complications of this disease. Recently, Ingraham and associates[7] reported the presence of subdural effusions in eight of 23 random cases of influenzal

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meningitis. Symptoms and signs that suggested this complication were persistant fever, convulsions, vomiting, and any focal signs at a time when one or-

COMPLICATIONS

Otitis media	11
Pneumonia	4
Serum Reactions	3
Deafness	2
Mastoiditis	1
Symptoms and signs suggestive of subdural effusion	5

Fig. 4.

dinarily expects the patient to be doing well. Incidence was greatest in the first year of life. Prather and Smith[6] reported the same experience. In reviewing our cases, we found symptoms and signs quite suggestive of subdural effusions in five. In our last seven cases, we have been aware of this complication, and have looked for it. We have not seen it although subdural taps have been done freely.

Figure V shows our experience with follow-up visits. These have been inadequate. We have not

FOLLOW UP VISITS

No sequelae at discharge—No further follow up	12
No sequelae with follow up on several occasions	12
Died	6
Bilateral deafness	2

Fig. 5.

carried out intelligence tests with our patients; however, we have not been impressed with a lowering of mentality in these children. Bilateral deafness in two patients was the only residual noted. Neither of these two patients received streptomycin.

SUMMARY

A total of 36 patients with type B influenzal meningitis were treated in several different fashions. The over-all mortality rate was 16.6%. Two patients were moribund on admission and three of the deaths occurred during the first 16 hours of hospitalization. It is our opinion that early diagnosis and treatment are essential to a good prognosis. Three of our six deaths occurred before specific therapy became effective. Type specific anti-influenzal rabbit serum was certainly the common denominator in our cases. However, chloramphenicol may prove to be quite satisfactory alone. Complications and residuals were enumerated.

Four cases are included in the paper which are not shown in the tables.

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SURGICAL TREATMENT OF GLAUCOMA
A Study of Seventy-Five Consecutive Cases

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Roanoke, Virginia.

In the past twenty-four years, we have had an opportunity to review the operative work of various surgeons from different medical centers during the week of our Spring Graduate Course, and also to observe the work in various clinics here and abroad. As a result of our observations and experience, we have developed a technique, which, in our hands, gives uniformly good results in the treatment of secondary and chronic glaucoma. The operation is *iridencleisis.*

It is stated that true glaucomas are binocular and only about 8% of them are acute inflammatory processes. Of all the blindness in the United States, approximately 5% is caused by glaucoma, and, of these cases, about 90% are of the simple variety.

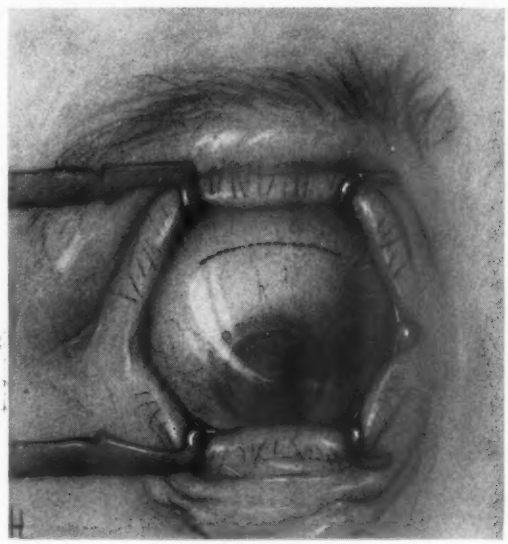

Fig. 1.

It is generally conceded, however, that no perfect method has as yet been devised to cure chronic glaucoma. We have no desire to disturb the equilibrium of anyone capable of performing a good trephine operation or any other surgical procedure for the relief of glaucoma. We wish only to give the results of our study in seventy-five consecutive cases. We are intentionally omitting a discussion of the differential diagnosis and the medical treatment. It will be assumed that a correct diagnosis has been made and surgical intervention is indicated. The only question is the type of operation best suited for the particular patient.

The technique which we present embodies five important features:

1. It is essential that we have a broad double flap consisting of conjunctiva and Tenon's capsule;
2. The incision must be at least two millimeters back of the limbus;
3. The sphincter muscle must be cut;

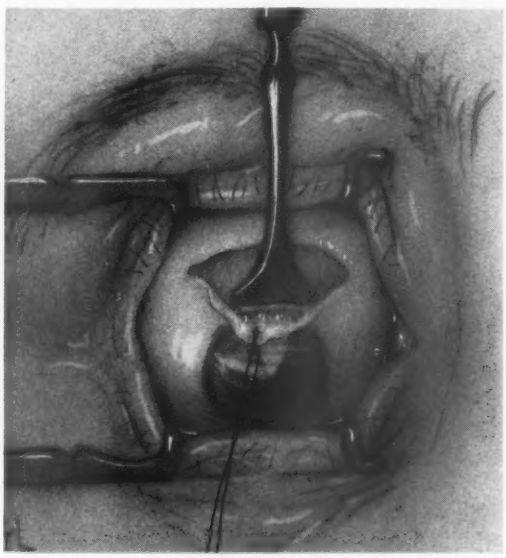

Fig. 2.

4. The radial incision in the iris must reach the very periphery of the iris;
5. There should be no root of the iris over the site of the coloboma.

Technique

The technique incorporates the features just mentioned. The patient is given nembutal, grs. ½, two hours prior to operation, and H.M.C. No. 2 one hour

before surgery. We use retrobulbar injection and one to two cc. of novacain with epinephrine; we produce akinesia by the Van Lint method. We usually wait five to ten minutes after the injection as absorption is slow in glaucomatous eyes. A straight incision is made through the conjunctiva and Tenon's capsule just below insertion of the superior rectus muscle. This gives a double flap. It is carried down to the limbus with extreme care to avoid button-holing of the conjunctiva. The anterior chamber is opened with a small keratome. It is important that the incision be made at least two millimeters back of the limbus. The opening is just large enough to admit the introduction of small iris forceps. In many

Fig. 3.

patients, as soon as the incision is made, the iris will prolapse, thus preventing the necessity of introducing any instrument in the anterior chamber. It is essential not to abrade the pigment epithelium, and it is also important that the pillars of the iris be pulled taut into the angle of the wound and left there. The tautness of the iris prevents blocking of the filtration angle.

INDICATIONS

The operation is indicated in chronic cases and also in secondary glaucoma. Some prefer to use it only in patients with chronic simple glaucoma. We do not hesitate to employ it in any type of glaucoma.

CONTRAINDICATIONS

There are no contraindications. Some writers have presented the possibility of sympathetic ophthalmia. We have not had this experience in our series of cases. In a recent article by Reese, in the *Archives of Ophthalmology* for December, 1945, he reported 110 consecutive cases and quoted Kronfeld of the Illinois Charitable Eye and Ear Infirmary, who has had 200 cases, and neither had a case of sympathetic ophthalmia to develop. I do not think that the incidence of sympathetic ophthalmia is sufficient to be a serious contraindication to the operation.

ADVANTAGES OF THE OPERATION

With this operation there is not only the possibility

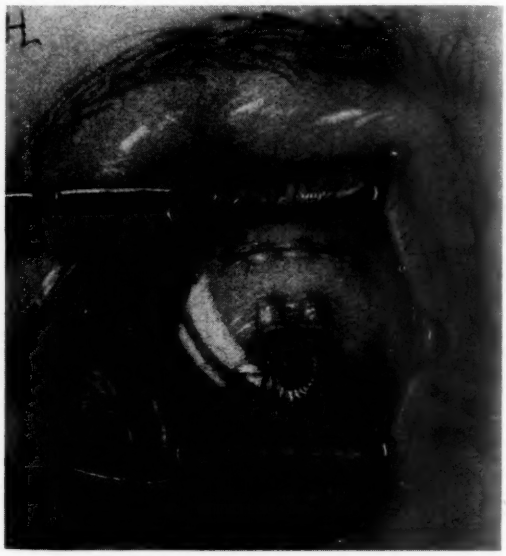

Fig. 4.

of arresting the disease but also the assurance that few if any complications will develop. This assurance is not afforded with the trephine operation, which is often followed by iritis, detachment of the choroid, changes in the lens, and often retarded restoration of the anterior chamber. It can be used in any type of glaucoma.

RESULTS

It is difficult to evaluate the statistics in our seventy-five cases as the state of the disease in which the operation was done was not always the same in each person. Furthermore, the duration of the fol-

low-up period was not the same. From the standpoint of arresting the disease and relief of pain, we have been successful in seventy-five consecutive cases. By arresting the disease, we mean that the tension remains within normal limits. It does not imply, however, that the vision will remain the same, as frequently the vision will continue to decrease. This is due to damage to the tissues of the eye prior to the operation.

Complications

We have not had any serious complications in our series of cases, nor have we been impressed by this in the hands of others in a review of the literature. Sometimes a mild iritis is present which has never proved serious. Eyes with primary glaucoma are predisposed to the development of cataracts. Operations for glaucoma in general, especially trephine operations tend to hasten the development of these incipient cataractous changes. Iridencleisis operations seem to indicate that this procedure predisposes less to the progression of incipient cataract changes than any other operation for glaucoma except possibly the straight iridectomy. We did not encounter any case of hypotony, detachment of the choroid, slow restoration of the anterior chamber or late infection.

Conclusions

Because of the simplicity and efficiency of the operation herein described, we recommend it to ophthalmologists who are not satisfied with the results they have obtained with other surgical procedures.

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711 South Jefferson Street

New Books

We list below some of the new books received by the Tompkins-McCaw Library of the Medical College of Virginia, Richmond. These are available to our readers under usual library rules:

Andrew—Cellular changes with age, 1952.
Bender—Child psychiatric techniques, 1952.
Blake—The present state af antibiotic therapy, 1951.
Carter, ed.—Monographs on surgery, 1952.
Conel—The Postnatal development of the human cerebral cortex. Vol. 4. 1951.
Corner—William Shippen, Jr., pioneer in American medical education, 1951.
Earle—A guide to children's dosages, 1951.
Grant and Reeve—Observations on the general effects of injury in man, 1951.
Hampton—Wounds of the extremities in military surgery, 1951.
Hartwell—Surgery of compounds which have been tested for carcinogenic activity, 2nd ed. 1951.
Krantz and Carr—The pharmacologic principles of medical practice, 1949.
MacCallum, et al.—Infective hepatitis, 1951.
Moore—Statistics for medical students, 1951.
Pollack—Social science and psychotherapy for children. 1952.
Surgical practice of the Lahey clinic, 1951.

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ACUTE SHOULDER BURSITIS AS ENCOUNTERED IN GENERAL PRACTICE

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When the term shoulder bursitis is mentioned a physician unaccustomed to the management of cases of shoulder bursitis thinks fleetingly of a minor, transitory affection causing a little pain in the shoulder. With no further ado he dismisses it along with vague thoughts of aspirin and heat adequately covering the situation. No doubt this is true of many minor episodes involving the shoulders but occasionally there is an encounter with a severe, fulminating type of shoulder bursitis of such nature as to constitute a major illness and to cause more suffering and disability than many major operative procedures. Two or three years ago a busy practioner would encounter a case of bursitis now and then, but in the past year the number of patients having severe disabling bursitis appears to have increased. In my own practice within the past six months there have been six, all of which were severe and caused considerable disability.

The anatomy of the shoulder girdle will not be developed in this paper except briefly. There are six to eight bursae located about the shoulder joint. Some are constantly present but others may be absent. Some of these communicate by small openings with the shoulder joint proper. Others form closed synovial sacs which, when acutely inflamed. become distended with fluid or pus. At times several bursae communicate with one another. All of them are covered by the deltoid muscle, except one, which lies superficially over the acromion process and seldom causes trouble. Practically any bursitis of the shoulder is of necessity subdeltoid but different bursae may be involved and points of maximum tenderness vary accordingly. The three most important bursae as judged by the difficulties they cause are: 1: The bursa subdeltoidea, which lies between the deltoid muscle and the major tubercle of the humerus. This one is most frequently involved and is the point toward which most therapeutic measures are directed. When distended and in a subject not too heavily built this bursa can be palpated as a fluctuant, tender point directly over the major tubercle of the humerus. 2: Bursa subacromial, which is primarily located between the capsule of the joint and the supraspinatus muscle and both are beneath the bony acromium process. 3: Bursa coracobrachialis, which lies beneath the coracoid process and separates the coracobrachial muscle from the tendonous intersection of the subscapular muscle. All three of these bursae lie adjacent to, either beneath or above, muscles whose action abduct the arm and, consequently, the movement of abduction is invariably painful when these bursae are inflamed.

Acute shoulder bursitis is properly classified as a medical emergency, not because life is endangered but because the pain caused by it is so severe. In mild cases codeine and salicylates do help relieve this, but in severe ones nausea and vomiting develop before relief of pain occurs. Morphine and dilaudid likewise give little or no relief. The reason for this is that most of the pain arises from muscular spasm and this spasm is increased by the slightest movement. With the help of drugs and from exhaustion a patient may doze momentarily at times only to be jerked awake with pain when the muscles about the shoulder suddenly snap into spasm.

Also, an aching, bone type of pain is present continually. It radiates most often down the arm to the elbow, wrist and hand. There are times when the patient complains much more of the pain in his hand, wrist or elbow than he does of the shoulder. In three patients only the slightest movement of the fingers was possible and this caused severe pain. Occasionally pain may radiate to the chest and borders of the pectoral muscles on the affected side.

Upon entering the patient's room the doctor can often make the correct diagnosis without a word having been spoken and without touching the patient. They usually sit upon the edge of the bed, lean slightly forward and toward the affected side. The forearm on that side is folded across the abdomen and supported by the other hand. The shoulder droops as the patient shifts his position slowly and ever so slightly. Pain, fatigue and utter exhaustion show in their faces. They can neither

lie down nor move about. The slightest shaking of the bed will cause strong and otherwise stoic men to cry and shed tears like a child.

Examination should begin with inspection of the shoulder. Often there is a noticeable difference in the two shoulders and the painful one will show rounding and slight fullness over the point of the shoulder. Moderate edema of the entire arm and hand may be present. Very gentle finger tip palpation quickly locates the point of maximum tenderness which should be marked with ink for further reference. If the confidence of the patient can be obtained, the elbow may be held in one hand and the wrist in the other and the arm abducted slightly. As long as the patient remains relaxed he has little pain but any contraction of the muscles on his part immediately results in a terrific spasm and pain.

Certain observers have made a division among patients—those with bursitis and those having so-called tendinitis. In clinical observations I have been unable to make any clear cut distinction between them. All of the symptoms present in one are present in the other and the only factor upon which to base a distinctive diagnosis is the appearance of small calcium deposits about the shoulder. However, these are often found in shoulders never having had any symptoms at all and other shoulders giving marked symptoms show no calcium deposits. From a practical standpoint they are one and the same and are similarly treated. The demonstration of the presence of calcium deposits is, however, of value. It indicates an abnormal process that has been going on for some time and, while there may have been no symptoms as yet, an acute episode may develop at any time. I have no analytical studies to show that calcium deposits occur more frequently in those shoulders having symptoms but such has been my impression and, of my six recent cases, four showed calcium deposits about the shoulder joint. It has been noted that on several occasions radiopaque bodies have disappeared following acute inflammatory episodes. Whether they disappear as a result of therapy or as a spontaneous process following inflammation and its accompanying increased vascularity cannot be told. No doubt therapy helps but I suspect some disappear without therapeutic measures having been instituted.

Treatment of acute shoulder bursitis will be considered under several headings. In general there is little agreement as to just what form of treatment is best. All agree that no one method is always satisfactory. In handling my own patients I have employed practically all of the recommended measures and found that what one patient responds to may cause the next to be more uncomfortable. Having nothing specific to offer, one must proceed to some extent by trial and error. It is the duty of the physician to relieve pain and if he can accomplish this he will have an appreciative patient for life. Pain is the thing that forces the most rebellious patient to seek medical aid and, consequently, it is the hub about which therapeutic measures revolve. Initially, the relief of pain is the only important objective to seek.

Drugs: The use of narcotics for the relief of pain has proven unsatisfactory. Even large doses of codeine, morphine or dilaudid give very little relief. Nausea and vomiting which they induce cause the patient to retch and strain, every movement of which sets up additional muscular spasm and increases pain in the shoulder. Small doses of codeine given with salicylates or in combination with empirin compound do give some relief if the process is not severe. Unless specifically instructed, most patients will repeat this too often and will induce vomiting. It is better to use codeine sparingly and supplement with another drug such as demerol. Usually, to give some immediate relief, I give demerol 100 mg. hypodermically. This appears to lessen muscular spasm and the exhausted patient will soon fall into a sleep which will last from three to four hours. Accompanying this hypodermic injection, sodium salicylate in 10 gr. enteric coated tablets is given orally and repeated every four hours along with ½ gr. of codeine or 100 mg. of demerol in oral tablets. For the first two or three nights hypodermic injections of demerol may have to be given fairly often. Some member of the family can usually do this after brief instruction. Tolserol, a fairly recent drug development, should be mentioned. It is supposed to relieve spasm of striated muscle and there are favorable reports of its use in acute shoulder conditions. However, I have had little experience with it and have been able to obtain satisfactory results with other accepted drugs.

Heat: Contrary to reports by some writers I have found heat to be of considerable value provided it is applied correctly. In the acute phase heat applied

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as infra-red rays for thirty to forty minutes several times daily, accompanied by very gentle stroking of the affected part gives marked relief. Following this, methyl salicylate is applied locally without massage and the patient then slips on a thin shirt of cotton and over this a light 100% wool sweater or jacket with long sleeves. The hand should be wrapped in a light wool shawl. The patient should sleep in this attire. Infra-red may be easily obtained by the use of inexpensive electric bulbs made for this purpose or if an open fire place is available simply by allowing the reflected heat to play on the exposed skin. Patients with means will gladly purchase one of the larger standard infra-red lamps and they are well worth while. They cost usually about twenty-five dollars.

After the acute process has subsided diathermy may be used and if used at all should be given for thirty minutes every day. In the first stages of a severe illness diathermy will cause increased pain and should not be applied until the most acute part of the process has passed. After about ten days of daily treatments they may be reduced to three times weekly and this continued until function in the shoulder is restored.

X-Ray: Treatment with Roentgen ray has been condemned by some and praised by others. Most roentgenologists believe that it is the treatment of choice. Physicians less confined in their work and observations are inclined to question its value. My own experience has been too limited to express a positive opinion either for or against its use but I have seen no harm come of its use. It is logical to reason that if roentgen rays do accelerate an inflammatory process, as they are supposed to do, some hastening of the absorption of exudates and calcium material about the shoulder should occur. I have refrained from using roentgen rays during the first two or three days when the acuteness of the process is at its height. As soon as the peak of intenseness has passed I usually give it and no patient has so far been worsened. Most of them feel that recovery was more rapid after treatment and such has been my impression. At the first sitting in an acute case about 100 R. is usually given and this repeated every third day for three or four treatments. Dosages vary to some extent with different roentgenologists but their results are about the same. I definitely believe that roentgen ray treatment should be used but never to the exclusion of other methods.

Surgical Procedures: There was a period some years ago when many physicians believed that calcium filled bursae should be removed surgically. Gradaully the wisdom of this method came to be more often questioned than sanctioned. The end results obtained with surgery proved to be no better than those obtained with non-surgical methods. At present it is rare indeed to have to remove a bursa surgically and, when done, it is after other methods have failed and when dense calcified areas can be demonstrated roentgenologically. Compared to surgical removal or opening of a bursa, puncture and aspiration is relatively a simple and easy procedure. At the point of maximum tenderness which was marked during the initial examination a wheal is raised with 2% procaine through a hypodermic needle. This procaine is injected into the surrounding area and into the bursa. Then, using an eighteen gauge sharp, long beveled needle on a 10 cc. syringe, the bursa is sought after. One cannot always obtain material from a bursa but occasionally two or three cc. of cloudy material or rarely pus may be obtained. Whereupon I usually disconnect the needle from the syringe, fill it with 2% procaine and inject it into the bursa. This is followed by multiple needle punctures attempting to place them into the bursa. Theoretically, this breaks up the calcium deposit and/or allows it to escape into the surrounding tissues where it is absorbed and recovery takes place. I have seen no convincing proof that this occurs or hastens recovery. The procedure can be very painful and the effect of procaine last only a few minutes. Seldom do I aspirate or needle one now, although no doubt there is a place for this procedure, especially where very definitely a point of tenderness is present or a distended bursa can actually be palpated. In such cases relief may be dramatic.

Immobilization: At first glance it would seem that since the pain is due to spasm and spasm to movement of the joint, immobilization would solve our problem and thus bring relief. It is not so simple, however. To put a patient who has an acute and painful shoulder in an aeroplane plaster cast would require a general anesthetic and hospital care. The other alternative, a Velpeau bandage, is also unsatisfactory because even though it immobilizes the arm and shoulder to a degree, pain continues just as intense if not worse. The shoulder is so

constructed and arranged as to make it an awkward proposition to encompass when attempting immobilization so complete as to put all the shoulder girdle at rest. After two unsuccessful attempts at relief of pain through immobilization and having several other patients come to me to be released from their cages, I have given up the idea entirely and rely on other methods to lessen the suffering of my patients.

After a period of several days to a week the acute process begins to subside. In from ten days to two weeks slight movements of the arm are possible with little pain. It is impossible to tell how long it may be in any individual case until exercise may be started but the quicker the patient can begin them without too much pain, the sooner will he recover and the better will be his prognosis.

There are numerous ways of obtaining abduction of the arm. The best and simplest of all are the pendulum and circular movements carried out by having the patient bend forward, allowing both arms to swing as loosely as possible in a circular movement. At first this may be ever so slight but as he gains confidence in the maneuver motion becomes easier. By grasping the ailing wrist with the good hand and holding it at the height of its swing, then straightening up, the average patient will be pleased and surprised at the amount of elevation he can carry out. Persistence will be his key to complete restoration of function.

Summing up briefly the important factors in handling acute shoulder bursitis, I list five things:

1. Drugs—Salicylates and Demerol.
2. Heat—Infra-red.
3. X-Ray therapy.
4. Puncture, multiple, of the bursa.
5. Exercises—Circumduction type.

3417 Memorial Avenue.

Urges Regular Heart Tests for Workers in Industry.

Heart function tests should be employed routinely and regularly by industry. Such tests would further aid in the detection of heart disease in workers whose hearts have appeared to be normal during ordinary clinical examinations, three New York heart specialists stated in the March 8 Journal of the American Medical Association.

In addition to helping to ferret out previously undetected cases of heart and blood vessel disease, which is the leading cause of death in the country today, these tests are needed to evaluate and process disability claims in life insurance and workmen's compensation cases, and to determine the time for retirement of the increasing numbers of aged employees, they stated.

"Cardiac function tests, therefore, are today at least as vital in industrial medicine as they have been in the past in private practice," according to Drs. Leon Pordy, Arthur M. Master and Kenneth Chesky, of the cardiographic department of Mount Sinai hospital.

The continuing partial disability of workingmen with heart disease is much more important than is the occasional dramatic heart attack, the doctors pointed out, adding:

"From the standpoint of the nation's needs, the physician in industry must assume the responsibility for ferreting out previously undetected cardiac disease from among the employees or executives of his concern."

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CARCINOMA OF THE SECOND BREAST—
A Case Report

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The development of carcinoma in the second breast after radical removal of the first breast is a manifestation that requires special attention, since statistics show that the disease may appear in the remaining breast at any time during the life span of the patient. Therefore, two distinct problems are presented by appearance of carcinoma in the breast:

1. The individual susceptibility of cancer—i.e., "Cancer diathesis", and
2. The advisability of removal of the second breast prophylactically.

Theoretically, one postulates whether a person developing carcinoma is more likely to be affected again after removal of the first tumor and practically one debates whether the incidence of late metastasis or new growth in the remaining organ is high enough to warrant prophylactic surgical removal of the second breast.

It is well known that 50-75% of breast cancers make their demise within three to five years after the first operation; therefore, the question is raised—which percentage of patients living after 3-5 years will develop carcinoma in the second breast?

The expectancy of carcimona in the second breast in women living five years or more after the first radical is 7—10%. Thus, the patient is four times more likely to develop cancer in the second breast than the normal woman, of the same age group, is to develop her first tumor.

Dr. Kilgore, in his analysis of 1100 cases of carcinoma of the breast at Johns Hopkins Hospital, showed the following interesting figures:

37 or 3.36% of the cases had bilateral involvement.

13 of the 37 cases had bilateral involvement when seen;

13 of the cases were new growths after the first radical,

and 11 cases were metastasic from the first tumor.

McWilliams calculated that in 5% of women with carcinoma of the breast, it develops in both breasts, occurring simultaneously in .2% and consecutively in 4.7%. It is expected that the incidence of bilateral involvement will be increased as the thoroughness of the follow up improves.

Perhaps half of the cases of bilateral carcinoma are examples of secondary involvement of the opposite breast late in the course of the disease in patients in whom the operation on the side originally involved failed to completely eradicate the disease locally. The internal mammary lymphatic pathway becomes blocked by metastasis and retrograde permeation of the lymphatics crossing the mid-line carries the carcinoma into the opposite breast. This is a regular event in carcinoma "en cuirasse".

If, however, there are no axillary nodal metastases at the time of the first radical and no evidence of local recurrence, then the second breast cancer is more than likely a new growth.

Miss S. H. C., #50-2836, a white, nulliparous female, 58 years of age, had a supravaginal hysterectomy and appendectomy in 1939 for a leiomyomatous uterus. During May, of 1950, a left radical mastectomy was performed for an intraductal papillary carcinoma without axillary metastasis. The other breast was entirely normal. A course of deep X-ray therapy (6,500 r) was administered and the patient had an uneventful convalescence.

In October, 1950, patient first noted a small nodule in the right breast. A radical mastectomy for the second breast was performed. Pathological report showed it to be an adenocarcinoma with axillary metastasis. A skeletal survey of the patient for possible metastasis has been negative thus far. She has completed a second series of X-ray therapy (5000 r) and has now returned to her normal duties.

In view of the fact that the first tumor was intraductal papillary type without metastasis and in the absence of local recurrence, it is believed that this patient had two distinct carcinomas within a period of six to seven months.

From the surgeon's view point, it is very important to know whether carcinoma of the second breast is a new growth, a metastasis or local extension from the first breast. If the second tumor is a new growth, a second radical is indicated; however, if it is metas-

tatic, this course is impossible and palliative radiation only can be administered. In the absence of evidence of local recurrence, the second tumor should be treated as a new growth.

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600 Wainwright Building

New Method of Blood Transfusion Described.

A new and safer method of giving blood transfusions to elderly patients and to other persons with heart diseases and associated disorders was described in the Dec. 22 J.A.M.A.. The procedure consists of giving sedimented red blood cells with the patient in a sitting position, instead of whole blood with the patient in a horizontal position.

The frequency of complicating conditions in transfusions led to the development of the technique, according to Drs. Victor Ginsberg, Nathan R. Frank and Richard S. Gubner, of the blood bank and department of medicine of the Kings County Hospital, Brooklyn, N. Y.

"In situations requiring transfusion of large amounts of blood, a practical difficulty is frequently imposed by associated disorders which restrict the ability of the heart to accommodate an increased blood volume," the doctors said.

Under the new procedure, red blood cells are allowed to settle in bottles in a refrigerator for approximately 48 hours. The plasma is then siphoned off with the aid of an empty vacuum bottle, leaving only the neccessary red blood cells which are used in the transfusion. The sedimented blood is administered with the use of gravity at an elevation of four feet by means of an 18- or 17- gage needle.

The important advantages of this method include the reduction of the volume of fluid administered by practically one-half, the elimination of three-quarters of the sodium content of the blood, and the averting of the air vesicles and tissues of the lung becoming filled with serous fluid, according to the report.

In certain circumstances where transfusion of a large amount of red blood cells is necessary, a partial exchange transfusion may be performed, the report pointed out. This is accomplished by removal of the patient's whole blood and the replenishing of it by sedimented red cells. Subsequently, the patient's own red blood cells are returned after sedimentation has occurred and the plasma removed.

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PUBLIC HEALTH

MACK I. SHANHOLTZ, M.D.,
State Health Commissioner of Virginia

Rabies

Rabies continues to be a problem of Public Health importance in Virginia. The accompanying Table lists the number of cases of rabies in animals and in man in Virginia since 1938:

RABIES IN VIRGINIA

Year	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	Jan.-Feb. 1952
Animal	55	66	97	54	89	277	334	116	108	162	149	82	94	223	96
Human	3	0	0	1	0	1	1	1	1	2	0	0	0	0	0

Although cases of rabies in man are rare as compared to other diseases, it is widespread in animals in the United States, both among domestic and wild animals.

Of the 223 cases of Animal rabies reported in 1951 in Virginia, 115 (51%) were in dogs, 62 (28%) in foxes, 25 in cattle, 18 in cats, and 3 were miscellaneous. Of the 96 cases reported in Virginia in January and February 1952, 50 (52%) were in foxes, 27 (28%) in dogs, 13 in cattle and 6 in cats.

The high incidence of rabies in foxes has largely been concentrated in the counties of northern Virginia. In late January representatives of the Fish and Wildlife Service of the Department of Interior met with health officers and supervisors of the affected counties to plan a concentration program of fox elimination and control. As a result of a bounty system established in several of the counties, bounties have been paid on a sizeable number of both gray and red foxes.

The principal source of danger to man, however, results from the rabid dog and primary efforts should be concentrated on dog control. Dog control measures have proved successful in eradicating rabies in other countries; notably England and Scandinavia, where the disease was once as common as it is in the United States today.

CONTROL MEASURES ADVOCATED

1. Licensing of all dogs.
2. Periodic anti-rabies vaccination of all dogs.
3. Collection and destruction of stray and ownerless dogs.
4. Quarantine of dogs when there is an outbreak of rabies in a community.

The present policy of the State Health Department is to encourage the passage of local ordinances for the vaccinating of dogs and the collection and disposal of stray dogs. A difficulty with the promotion and enforcement of the dog vaccination requirements has been the necessity for annual vaccination. With the availability of a new vaccine which gives longer immunity, it is hoped this difficulty will be overcome.

MONTHLY MORBIDITY REPORT OF THE BUREAU OF COMMUNICABLE DISEASE CONTROL

	Feb. 1952	Feb. 1951	Jan. Feb. 1952	Jan. Feb. 1951
Brucellosis	2	2	3	10
Diarrhea and Dysentery	329	179	734	442
Diphtheria	12	18	22	32
Hepatitis	81	1	136	3
Measles	1872	940	2816	1482
Meningitis (Meningococcal)	11	15	29	29
Poliomyelitis	2	3	6	11
Rabies in Animals	48	13	96	16
Rocky Mt. spotted fever	1	0	2	0
Scarlet Fever	94	164	175	314
Tularemia	9	4	21	15
Typhoid and Paratyphoid	6	3	9	13

MENTAL HEALTH

Joseph E. Barrett, M.D.
Commissioner, Department of Mental Hygiene and Hospitals

The Mental Hospital Chaplain*

On September 1, 1951, the Eastern State Hospital at Williamsburg added a trained, full-time chaplain to its therapeutic team. In several hospitals in other states, the value of such a chaplain's work has been amply demonstrated, but it is only recently that in Virginia adequate funds have been made available for filling this position. This development should be of particular interest to the doctors of the state, for it represents an increasing recognition on the part of physicians that religion plays a vital role in health for better or for worse.

The following instance will illustrate the interrelationship existing between the work of the chaplain and other members of the therapeutic team.

A sixty-one-year-old widow was admitted to our hospital several months ago. The onset of her mental symptoms had been rapid. She heard voices plotting against her, and thought that the noises made by the radiators in her house were designed to drive her away. Depressed, suspicious, apprehensive, and frightened, she had many morbid fears and seemed unable to bear being left alone in her house. She thought that government authorities were after her, that radios had been installed in the neighborhood to listen to what she said, and that people were trying to run her out of her home. She manifested a fear of dying or being killed and made "preparations towards passing on", such as leaving notes for the undertaker and minister. The crying spells which she had since the death of her husband five years previously had increased considerable in recent months. Many of these symptoms were of course suggestive of an involutional psychosis.

At our hospital her admitting physician described her mood as one of depression. Her orientation was good, and answers to questions seemed relevant and coherent. Some ideas of a paranoid nature were still present, but she was not evasive. This physician discovered that the symptoms given above had taken place at about the same time that brown spots, which were described as producing a burning sensation, had appeared all over the patient's legs. The physician felt that lack of evasiveness and the absence of psychomotor retardation, and the way in which symptoms were recognized as being "unusual", seemed to eliminate the probability of this being an involutional psychosis. The presence of the brown spots on her body, plus a history of having taken medication for hypertension, suggested the possibility of bromide intoxication. Accordingly, on the day after admission a blood study was made, and the blood bromides were reported as being in excess of 175 mg. per 100 cc.

Subsequently the blood bromide was brought down to sixty by forcing fluids and by the administration of sodium chloride. When this patient appeared before staff two months after her admission, she gave no evidence at all of being psychotic, although she recalled her delusions and hallucinations prior to her admission to the hospital.

This woman has had a history of hypertension for the past seven years. At the time of her admission her pressure was 190/130, but within a month it had dropped to 135/75. She received her discharge from the hospital three months after coming here.

What has our religious therapy program to do with a situation of this sort, which seems so obviously a strictly "medical" problem?

Just before leaving the hospital, this woman talked briefly with the chaplain and spoke of "going home . . . not ashamed . . . no longer afraid". She volunteered the opinion that our program of religious therapy had helped considerably in achieving such a point of view. Obviously, "religion" had nothing to do with clearing up the excess bromide in her blood, which seemed the most immediate cause of her psychosis. At the same time it should be noted that the bromide was prescribed for her hypertension. The most plausible explanation of this hypertension is that it had been caused, at least in large measure, by extreme anxiety. Now she reports that she is "no longer afraid", and that the religious therapy program here at the hospital has contributed significantly to that feeling. If this is actually the case, then this program may have been somewhat instrumental in her recovery in the larger sense and may help in preventing a recurrence of her illness.

*Article prepared by Archibald F. Ward, Jr., B.D., Ph.D., Chaplain, Eastern State Hospital, Williamsburg, Virginia.

Now, I should like to discuss some of the details of our program. The work of the chaplain as a member of the therapeutic team includes several areas of operations. Some parts of this work fall in the broad field of group therapy.

Group therapy sessions are currently being held with a limited number of alcoholics—the chaplain is in charge of the men's group, and the clinical director works with the women. A program of this sort with other groups will probably be undertaken later. However, the principal group therapy is our chapel service each Sunday morning. (Worship services are possibly the oldest and, potentially at least, among the most effective forms of group therapy.) What these services aim at, and apparently sometimes accomplish, is to help these people feel and accept the love and mercy of God and to accept themselves and their fellows. In this process we hope to lessen the load of excessive anxiety which many of them carry, make it possible for them to be relieved of inappropriate feelings of guilt and shame, and, in general, learn to face life creatively and constructively.

These services are as non-sectarian as we can make them. The attendance is, of course, on a strictly voluntary basis.

It seems to have been almost entirely through these services and a Communion service that the patient referred to above received her religious help, for I talked with her privately on only two occasions and then rather briefly. One of the occasions was after a morning church service and the other at the time of her discharge. One reason for citing her case is that it demonstrates the kind of religious therapy which is available for all of our patients who are able to leave their wards, even when there is not opportunity or demand for individual conferences.

In addition to these non-sectarian services of worship, the chaplain also coordinates other religious services which are held by volunteer groups in the community. A local priest celebrates Mass once a week for those Catholic patients who wish to attend. The chaplain also arranges for a Jewish rabbi to consult on occasion with patients of that faith, and for local ministers to visit patients who may have religious needs of a denominational nature. It is the chaplain's job to see that the religious needs of the patients are met in the way which will prove most helpful to them.

Another phase of the chaplain's work concerns conferences with individual patients. Often such therapy is prescribed by one of our physicians. At other times the patients themselves make requests to see the chaplain. This part of the work may be carried on either while the patient is receiving no other treatment, or in conjunction with such treatment as electro-shock or insulin. Sometimes one or two sessions in the chaplain's office or on the ward seem to be sufficient. Other patients have appointments over a longer period of time.

One patient, before coming to the hospital, was obsessed with the idea that the whole world was against her. Some of her friends, she complained, were trying to break her "into little pieces", and were influencing others against her. She would weep in a convulsive fashion, saying that she had lost faith in everyone and had "no reason to live".

This patient came to my attention when our clinical director reported to me that this woman had claimed that she was "cured" on the previous day at the worship service. Even such an exaggeration was worth a follow-up, and I have had four conferences with her since that time.

Apparently what had helped in the worship service was the statement that it is important for us to realize that this is not a perfect world, that we are not perfect people, that our friends are not perfect, and that we do not need to expect to find perfection. This was followed by a statement to the effect that God made a *good* world without making one which was altogether perfect, and that there can be an overall goodness and satisfaction in life though life itself is shot through with imperfection.

This woman's life story is replete with factors culminating in a felt need for perfection. Her father died when she was two years of age, and her mother has been "sickly" since that time, having a number of "spells" in which she would lose consciousness. Discipline was soon put in the hands of her only brother, two years her senior, who would periodically "beat her up", first upon instruction from the mother, and later also on his own initiative. These "beatings" have taken place from childhood up until the very recent past.

It seems to her that the memory of her father and God are "all mixed up together". She remembers her mother looking out of the window at one of the stars and repeating the Scandinavian name for it—translated in English as "Father's Eye". In her

early years all she knew of the Bible was "Honor thy father and thy mother" and "Thou shalt love thy neighbor". Though her father was dead, and in all conscience she could not have much honor for her mother, at the same time she had built up a highly perfectionistic image of her father, which of course clashed severely with what her brother represented as a father substitute in the home.

About five years ago, after her marriage had ended in divorce and her brother had "beaten her up" rather severely, she went on a prolonged spree, but afterwards decided that that was not the way to try to solve her problems. In an attempt to find a more adequate solution, she became interested in a church which laid great stress upon absolutes and perfection. At this time she added to her knowledge of the Bible the often misunderstood statement, "Be ye perfect". Before long she was greatly disappointed in her association with this church group. She believes that her brother has told some of the members something about her past life which she is thoroughly ashamed of but feels is now behind her, and that this knowledge of past events has led to a rejection by members of this church. She finds it extremely difficult to understand how people who "talk so much about the love of God" should be the very ones to hold against her what happened years ago.

She told me recently that she has come to accept the world and the people in it as imperfect and is making progress in realizing that God loves us as we are, regardless of what we have done or do now. She reports also that in learning to accept other people as they are, she is actually able to "like" them better. It would appear that she is making progress. Certainly her behavior in the hospital is quite different from what was observed before she came here.

A projected part of our program calls for a period of in-service training for theological students and ministers who recognize the need for a psychiatric orientation in trying to help people in trouble. It is anticipated that some of those who are trained at our hospital will themselves become chaplains.

Our entire program aims at meeting the needs of our patients by utilizing as fully as possible the most adequate resources in religion and medicine. At the same time, we are fully aware that even the best which we now know is often not enough. Hence the paramount importance of a program of research even while we are trying to meet the desperate current needs.

Representatives of religion have worked at some human problems at least as long as doctors have. Often grave errors have been made by both groups, especially when they have insisted upon going their separate ways. Socrates' long-standing charge that "the great error of our day in the treatment of the human body" is "that physicians separate the soul from the body" is actually a two-edged sword, for religion has often been as obsessed with "soul" as medicine has with "body". In these present days we recognize increasingly that "the part can never be well unless the whole is well". As the forces of religion and medicine work together, patiently, intelligently, and courageously, as members of one therapeutic team, substance may be added to the dream that a new era of healing is in store for mankind.

XUM

MISCELLANEOUS

National Conference On Rural Health

At the request of the Council on Rural Health of the American Medical Association, I presented the Virginia Council on Health and Medical Cares' program to the Seventh National Conference on Rural Health which met in Denver, Colorado the end of February. Our State was one of six invited to present its program. The other States were Colorado, Illinois, Michigan, Missouri and North Carolina. The theme of the conference was "Help Yourself to Health".

I was asked to attend the pre-conference meeting for Rural Health Committees of State Medical Societies, certain Extension Service personnel and a few other health workers. This meeting was concerned specifically with "The Physician as a Citizen" and "The Advantages of Having a Full Time Health Educator". The doctors present stressed the importance of their participating whole-heartedly in health councils and other community efforts. They agreed that in the past too many doctors avoided these activities. The North Carolina Medical Society was complimented on their foresight in adding a trained health educator to their staff. The activities of this person, who works with the doctors and helps communities with their health problems, were described. The Medical Society feels the employment of such a person is an excellent investment in public relations and better health.

The first main address at the conference was given by Dr. John W. Cline, president of the American Medical Association. Dr. Cline urged that we not only try to attract young doctors to settle in rural areas, but that we also concentrate on educating our rural people in proper dietary habits, improved sanitation and immunization, and help them see the need for more hospitals in rural areas. The Virginia Council has already taken action on all of these suggestions.

During the afternoon of the first day the six States presented their programs on the theme of "We Have Helped Ourselves to Health—And How". It was here that I had the honor of telling some of the things we have been doing to bring better health to our people. Again at this conference as at others, I was impressed with the breadth and variety of our programs and projects as compared with other States. Our efforts to help locate physicians in rural areas appeared to be further advanced than those of the other States. We are doing more specific things and are getting more accomplished. Virginia can be very proud of its health program.

During the second and last day of the conference the theme was "These Things We Can Do". Representatives of farm groups, which make up the Advisory Committee to the Council on Rural Health, told us what we, as persons interested in rural health, could do. Here the matter of local responsibility and local initiative was stressed as the best way to gain progress. We were impressed with the fact that we can have anything we want if we are willing to work hard enough for it. As good health is our most prized possession, we should be willing to work for it.

This conference, as the six which have preceded it, was an excellent example of how physicians and laymen get together to discuss and work out health problems common to both groups. The A.M.A. is enthusiastic about what has come out of these meetings, and they see a very bright future for the work of the Council on Rural Health. You may be interested in knowing that next year's conference will be held in Roanoke the end of February.

EDGAR J. FISHER, JR., *Director*
Virginia Council on Health and Medical Care
102 E. Franklin Street
Richmond, Virginia

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President..... Mrs. Herman W. Farber, Petersburg
President-Elect—
Mrs. Thos. N. Hunnicutt, Jr., Newport News
Recording Sec'y..... Mrs. L. Benj. Sheppard, Richmond
Corresponding Sec'y.. Mrs. Carney C. Pearce, Petersburg
Treasurer..... Mrs. Kalford W. Howard, Portsmouth
Publication Chairman Mrs. Robt. H. Detwiler, Arlington

Executive Board Meeting

The Mid-Winter board meeting of the Woman's Auxiliary to The Medical Society of Virginia met at The Medical Society of Virginia building on March 5, 1952, at 10 a.m. with Mrs. Herman W. Farber presiding. There were 22 members present.

The officers' and chairmen's reports were accepted as read.

Mrs. J. E. Hamner, a member of the Revisions Committee and chairman pro tem, prepared the report because of the illness of the chairman, Mrs. Decormis. In the absence of Mrs. Hamner, Mrs. F. J. Wright, Sr., presented the revisions which are as follows:

I—Membership: Sec. 3. Take out this section entirely. Put in place of same the following: "Associate membership in this auxiliary may be conferred by the Board of Directors on mothers, unmarried daughters and unmarried sisters of physicians who are members in good standing in The Medical Society of Virginia. Associate members shall be entitled to all the rights and privileges of active members except the right to vote or to hold office."

III—Election of Officers: Sec 6. After the word Committee at end of first line, insert "one member to be". After the word President in the second line, commencing with the word "at" take out remainder of that line, and through the fourth line, stopping with the word "Chairman". After the word "President" in the second line, insert the following: "and two elected by the Board at the Mid-year Board Meeting.

IV—Duties of Officers: In fourth line change word "confirmation" to "approval" and in same line change words "Board of Directors" to "officers".

VIII—Dues: Sec. 3 (b) take out the words "at-large".

IX—Amendments: Take out last sentence.

Mrs. Wright recommended that the revisions be adopted. This was passed by the Executive Board.

Mrs. Kruger moved that the Executive Board of the Woman's Auxiliary to The Medical Society of Virginia go on record as disapproving the interest on the Jane Todd Crawford Memorial Student Fund and recommended that the interest charged the recipient be discontinued and this be retroactive. Motion carried. Mrs. Reynolds moved that the treasurer be requested to withhold the funds contributed to the Jane Todd Crawford Student Loan Fund until such time as the matter of interest on this fund shall be clarified. Motion carried.

Mrs. R. M. Reynolds, Chairman of Civilian Defense, was invited to attend the conference in Chicago of the Presidents and Presidents-Elect to the Woman's Auxiliary to the A.M.A. and gave a report stressing the points brought out at the conference, that we should enter into political life, civil defense work, Red Cross work in our respective communities, and be sure to vote.

Mrs. Kruger moved that we accept the recommendation which Mrs. Hamner made concerning the past president's pin which is as follows: that a dye be made so that each past president can order her own past president's pin, the cost of the dye to be paid from the auxiliary funds. Motion carried.

Mrs. McCoy moved that the spending of the $50 which was for the essay contest be left to the discretion of Mrs. Grinels, the chairman of Nurse Recruitment.

Under new business, Mrs. Kruger invited the board members and members of local auxiliaries to visit a Health Pageant which is being held in Norfolk May 9, 10, 11th, at the city auditorium.

Mrs. McCoy moved that we present a gift to the Home of The Medical Society of Virginia, the amount to be spent not to exceed $35. Motion carried. Mrs. Farber appointed Mrs. Hoge and Mrs. Emlaw to purchase the gift. Mrs. Farber read a letter from Mr. Edgar Fisher, thanking the Auxiliary for the $50 contribution to be used for the support of the Virginia Council on Health and Medical Care.

Mrs. Farber introduced the speaker, Mrs. Virginia H. Campbell, director of nursing service for the Richmond (City) Department of Public Health, who addressed the board on "What Your Part of Civil Defense Is."

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There being no further business, the meeting was adjourned.

HELEN SHEPPARD (MRS. L. B.)
Recording Secretary

Warwick Auxiliary.

At the October meeting, a luncheon was held at Warwick Hotel, Newport News, officers for the coming year installed and the following chairmen named by the president: *Ways and Means*—Mrs. J W. Carney; *Membership*—Mrs. G. C. Amory; *Legislative-Publicity Relations*—Mrs. T. N. Hunnicutt; *Publicity*—Mrs. V. E. Lascara; *Lucille Hunnicutt Jones Award*—Mrs. J. T. Ransone; *Rolling Library*—Mrs. W. H. Kretz; *To-Day's Health*—Mrs. John Massey, Jr.; *Cancer Control*—Mrs. Russell Buxton; *Bulletin*—Mrs. Louis Richman.

In November, there was a luncheon meeting in conjunction with the Woman's Club of Newport News and the Newport News-Warwick County Tuberculosis Association, at which Mrs. Hunnicutt presided.

The annual bazaar was held at Buxton Hospital in November, proceeds from which are used toward Nurse Recruitment.

On December 19, officers of the Auxiliary entertained members with a Christmas party at the home of Mrs. Wm. A. Read, President.

JOSEPHINE L. LASCARA (MRS. V. E.)
Publicity Chairman.

Norfolk Auxiliary

The Woman's Auxiliary to the Norfolk Medical Society held their annual Valentine Dance in February at the Norfolk Yacht and Country Club, with 225 in attendance.

Mrs. Herman W. Farber, President of the Woman's Auxiliary to The Medical Society of Virginia, and Mrs. Thomas N. Hunnicutt, Jr., President-Elect, will be guests of honor at a luncheon-card party to be held by the Norfolk Woman's Auxiliary on March 25 at the Norfolk Yacht and Country Club.

The Norfolk Medical Society and their Auxiliary are co-sponsoring a Health Pageant, May 9, 10 and 11 at the Norfolk City Auditorium, with 80 health groups participating. They cordially invite any interested persons to attend. For information contact Mrs. Alfred L. Kruger, President, Woman's Auxiliary to the Norfolk Medical Society, 1074 Spotswood Avenue, Norfolk.

BOOK ANNOUNCEMENTS

Penicillin Decade. 1941-1951. Sensitizations and Toxicities. By LAWRENCE WELD SMITH, M.D. Medical Director, Commercial Solvents Corporation, and ANN DOLAN WALKER, R. N., Former editor "Trained Nurse and Hospital Review." Arundel Press, Inc., Washington, D. C. 1951. 122 pages. Price $2.50.

Standard Nomenclature of Diseases and Operations. Edited by RICHARD J. PLUNKETT, M.D., Editor and ADALINE C. HAYDEN, R.R.L., Associate Editor. 4th Edition. The Blakiston Company, Philadelphia and New York. 1952. 1034 pages with 4 illustrations. Price $8.00.

From a Doctor's Heart. By EUGENE F. SNYDER, M.D. With a Foreword by Paul Dudley White, M.D. Philosophical Library, New York. xvii-251 pages. Price $3.75.

Antibiotic Therapy. By HENRY WELCH, Ph.D., Director, Division of Antibiotics, Food and Drug Administration, Federal Security Agency; and CHARLES N. LEWIS, M.D., Medical Officer, Division of Antibiotics, Food and Drug Administration. Foreword by CHESTER S. KEEFER, M.D., Wade Professor of Medicine, Boston University School of Medicine, etc. The Arundel Press, Inc., Washington, D. C. 1951. xiv-562 pages. Price $10.00.

Directory of Fellowship Awards. For the Years 1917-1950. The Rockefeller Foundation, New York, N. Y. With an Introduction by Chester I. Barnard, President of the Foundation.

Outline of Fundamental Pharmacology. The Mechanics of the Interaction of Chemical and Living Things. By DAVID FIELDING MARSH, Professor and Head of the Department of Pharmacology, West Virginia University School of Medicine. Charles C. Thomas, Springfield, Illinois. 1951. xxxi-219 pages. Price $6.00.

Biological Antagonism. The Theory of Biological Relativity. By GUSTAV J. MARTIN, Sc.D., Research Director The National Drug Company, Philadelphia. The Blakiston Company, Philadelphia and New York. 1951. xii-516 pages.

Daddy Was A Doctor. By LORENA OWENS. Illustrated by Paul Galdone. 221 pages. E. P. Dutton and Company, Inc., New York. 1951. Price $2.75.

This is a thoroughly enjoyable story by Lorena Owens, portraying the lives of her father and mother in a small town. Daddy was "one of the best doctors to be found anywhere" and "Mama" tried to be his business manager. The daughter while on a visit home hopes to get the place run on a more orderly basis but, in view of the many funny experiences which arise, she soon finds how impossible it would be to make changes.

The story is entertaining and refreshing.

A.E.

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EDITORIAL

Epidemic Influenza-Like Infection

PHYSICIANS each year, at the beginning of the season of colds, flu, grippe and influenza-like upper respiratory infections, have been apprehensive that we might be in for another pandemic of influenza similar to that of 1918. Such waves, at unpredictable intervals, have swept over the world and are the equivalent in severity to the plague of the Middle Ages. The pandemic of influenza of 1918-19 is estimated to have caused the deaths of some twenty million persons—more than were killed in battle on all sides in World War I.

During the present epidemic of influenza-like infection that has swept like wildfire through Virginia families, apparently no community has been spared. Incomplete reports have come from eighty-seven counties of the State.

The epidemic has not been confined to any geographical area of the United States. Its widespread character is indicated by the March 7, 1952 Morbidity Report of the U. S. Public Health Service, which reports outbreaks in such widely separated states as New York, Arkansas, California, Missouri and Kentucky.

Symptoms as noted by reporting physicians have included headache, coryza, sore throat, cough, generalized body aches, chills, fever, nausea and vomiting and in some cases diarrhea.

Symptoms may be limited to the respiratory or gastro-intestinal tract or both systems may be affected at the same time. A common observation has been the precipitate onset of symptoms.

Another characteristic of the present epidemic is the frequency of relapse following the acute stage of illness.

Regarding therapy, physicians have reported that the antibiotics appear to be of little value at the time of onset. When a relapse has occurred, several physicians have noted that in this subsequent period the antibiotics were of value in preventing or lessening the severity of complications.

Laboratory reports from several states indicate that Influenza B virus has been identified in a number of cases. During the outbreak last year Influenza A prime was the virus most implicated in Virginia. Throat washings from school children in Arlington County sick with the prevalent upper respiratory infection were found negative for Influenza A and B.

In a county in southeast Virginia, all ten members of a family had the infection in late February and early March. One child of this family, after apparent recovery, became ill and died. Blood serum from the members of this family have been forwarded to the Virus Laboratory of the U. S. Public Health Service for virus study for identification.

The National Office of Vital Statistics reports no significant rise in the number of deaths from influenza and pneumonia.

Decision as to the use of influenza virus vaccine is a problem for the physician. In 1941, Horsfall found a significant reduction in incidence of the disease in vaccinated over unvaccinated persons. A disappointing feature is the temporary nature of the immunization gained through vaccination. Following subcutaneous administration of influenza vaccine, antibodies begin to appear in approximately a week, reach maximum levels during the second week, remain constant for a month, and then gradually decline

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(Hirst). There is no agreement as to the duration of immunity following vaccination.

The argument against the use of Influenza A and B vaccine routinely is the dubious value of using a specific agent until we have convincing evidence as to the specificity of the virus involved in the epidemic.

ALBERT S. MCCOWN, M.D., *Director*
Bureau of Communicable Disease Control
Virginia State Health Department

Dr. Thomas Walker, 1715-1794

THE practice of medicine before and just after the Revolution was usually a part time job. In New England, it was combined with preaching or some political office of the town. In Virginia, the doctor-preacher combination was less frequent but farming and politics were ready outlets for the doctor's extra time and energy. Dr. Thomas Walker had so many extra irons in the fire, that it has been questioned whether or not he was a doctor of medicine. He was a surveyor, planter, merchant, importer, explorer, soldier, politician and diplomat, and he made such a name for himself in many of these fields that little has been said of his career as a doctor.

Thomas Walker, the youngest son of Thomas Walker of Walkerton and Susannah Peachey Walker, was born January 25, 1715 in King and Queen County and died in Albemarle, November 9, 1794.

He was the most distinguished member of the clan but his services to the colony and the State have never been fully appreciated.

His biographers all state that after his father's death, which occurred when he was quite young, he became a member of the household of Dr. George Gilmer of Williamburg where he obtained his first knowledge of medicine and surgery. Whether or not he ever studied abroad is unknown.

It was at this time that he was officially a citizen of Caroline County for in 1727 this part of King and Queen was cut off to form a part of Caroline County and there are many references on Caroline County order books, to Thomas Walker.

In 1741 he married a young widow, Mrs. Nicholas Merriweather, neé Mildred Thornton, who bore him 12 children and brought him 15,000 acres of land in Albemarle County. Here he built his home which he called Castle Hill which still stands and from which he directed his many activities. One of his most notable agricultural contributions was the introduction of the cultivation of the pippin in Albemarle County. Dr. Walker's first wife died November 16, 1778 and he later married her cousin, Elizabeth Thornton, who survived him.

In the meantime momentous things were happening among the Indians to the north and northwest of the mountains—things of great moment to Dr. Walker personally and to the country as a whole. The things for which Dr. Walker is best known fall into this period.

In 1768 he represented Virginia at a conference of the Colonies with the Six Nations at Fort Stanwix which made a treaty by which the Iroquois nation relinquished to the Cherokees the hunting rights to all land south of the Ohio River. Dr. Walker was commissary of the Virginia troops and was present at Braddock's defeat in 1755. In 1774 the Virginia troops under General Lewis defeated decisively the Shawnees at the battle of Point Pleasant. This put an end to the war, sometimes called Lord Dunmore's War. Dr. Walker was present at this battle and helped to make the treaty that followed. This treaty made considerable change in the western boundary. This was Dr.

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Walker's last contact with the Indians except that which was incidental to his surveying and exploration.

"On the 12th day of July 1749, the Governor and Council of Virginia granted to the 'Ohio Company' 500,000 acres of land to be surveyed and located south of the Ohio River, and to 46 gentlemen styling themselves the 'Loyal Company', leave to take up and survey 800,000 acres of land in one or more surveys, beginning on the bounds between this State and North Carolina and running toward the westward and to the north seas to include the said quantity, with 4 years time to locate said land and make return of surveys."

Dr. Thomas Walker
of Castle Hill
1715 - 1794

Courtesy of Mrs. Wellford Reed

His interest in the Loyal Company prompted him to make a survey into Kentucky, which he did in 1750. The diary which he kept on this trip was published by the Filson Society, and establishes the claim that Dr. Walker was the first white man to see and describe this beautiful land. He named the Cumberland Gap, River and Mountains, for the Duke of Cumberland.

Dr. Walker represented Louisa and Albemarle almost continuously in the House of Burgesses from 1758 on and was on most of the pre-Revolutionary Committees, the Committee of Safety, etc. These duties were so numerous that little was said of his medical activities. An early operation of trephine for suppurative osteomyelitis is

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mentioned by Ashhurst. He attended Peter Jefferson in his last illness in 1757 and he was the preceptor of George Gilmer, Jr., George Conway Taylor and William Baynham. The dates of the latter's preceptorship were 1764-1769.

We have been unable to locate a portrait of Dr. Walker, but the silhouette, kindly loaned to us by one of his descendants, gives some idea of his features. John Redd (Reminiscences of Western Virginia 1770-1790) notes that he was rather under the ordinary size, weighed about 140 pounds, and was round shouldered. "Dr. Walker had the reputation of being a highly educated man and of the very highest order of intellect, and no man bore a more irreproachable character than he did up to the day of his death."

SOCIETY PROCEEDINGS

The Virginia Pediatric Society

Met at Williamsburg, March 1 and 2, with an attendance of nearly one hundred doctors from all sections of the State. Dr. E. L. Kendig of Richmond presided. The papers presented were on timely subjects and most interesting. At the concluding session, Dr. Paul Hogg of Newport News was installed as president. The others serving with him are Dr. T. Stanley Meade of Richmond as vice-president, and Dr. T. J. Humphries of Roanoke who was re-elected as secretary-treasurer.

The Wythe-Bland Medical Society

Met at Wytheville on February 12, at which time they elected the following officers for the ensuing year: President, Dr. C. B. Hughes of Wytheville; vice-president, Dr. W. Randolph Chitwood, also of Wytheville; and secretary-treasurer, Dr. George Kegley of Bland.

The Roanoke Academy of Medicine

Had its regular meeting on March 3, in the auditorium of the new Roanoke Public Health Center. The program included two papers as follows:

The Development of Cataracts Following Electric Shocks by Dr. M. H. Williams, with discussion on the Medical and Neurological Complications by Drs. W. L. Powell and E. N. Weaver

Some Clinical Aspects of Subdeltoid Bursitis by Dr. C. B. Bray, Jr., discussed by Drs. C. H. Peterson and George S. Maxwell.

Lynchburg Academy of Medicine.

The regular monthly meeting of the Academy was held February 11th at the Lynchburg General Hospital. The meeting was a symposium on "Cough" with Dr. W. H. Barney, Donald Shotton, and a paper prepared by Dr. H. D. Hoskins was read by Dr. Echols.

Dr. Robert Lee Brickhouse was elected as a new member to full membership in the Academy and Dr. T. N. Davis and Dr. Otis L. Watkins were elected to Honorary Membership.

EDWIN A. HARPER, *Secretary*

The Virginia Radiological Society

Will hold its Spring meeting at the Cavalier Hotel, Virginia Beach, on Saturday and Sunday, April 19 and 20. All members of The Medical Society of Virginia and physicians in the Armed Forces are cordially invited.

Dr. J. Lloyd Tabb of Richmond is president and Dr. P. B. Parsons of Norfolk secretary.

NEWS

Scientific Exhibits.

Dr. Eugene L. Lowenberg, Chairman of the Committee on Scientific Exhibits, announces that the Committee will now receive applications for scientific exhibits for the meeting of The Medical Society of Virginia to be held in Richmond, September 28th through October 1st. The deadline for applications will be June 15th. The executive committee will then choose those to be shown and notify the exhibitors by July 1st. This will be necessary because of limited space at disposal for scientific exhibits. Applications should be requested from Dr. Hunter B. Frischkorn, Jr., 1000 West Franklin Street, Richmond 20, Virginia.

Dr. Haake To Address Virginia Academy of General Practice.

When the family physicians in Virginia gather at the Hotel Roanoke May 8-9, for the Second Annual Scientific Assembly of the Virginia Academy of General Practice, they may look forward to an outstanding treat, when Dr. Alfred P. Haake, author, lecturer and consultant to the General Motors Corporation, climaxes the two-day Assembly as the Banquet speaker on Friday night.

Dr. Haake is widely known as a speaker who "interprets, in an entertaining and stimulating manner, and in terms of everyday life, the fundamentals involved in today's complex economic, social and governmental problems". From the inside track of wide personal experience, he KNOWS the full economic picture, three-sided as it is—labor, management and political.

His achievements include preaching, professorships at the University of Wisconsin and Rutgers University, where he received the degree of Ph.D, and a great deal of radio work, in which latter field he was largely instrumental in the building of the well known radio program, "Wake Up America!", on which he has frequently appeared as a speaker. He has been Mayor of Park Ridge, Illinois since April, 1945, is constantly in demand as a speaker and has addressed audiences in practically every State in the Nation.

The GP Wives' Club will hold a luncheon meeting during the Assembly, at which time those officers not elected at the organizational meeting at Virginia Beach last October, will be elected for the balance of the period (to October, 1952) and plans for the expansion of the organization, the development of a project (other than the customary one of assisting their husbands in the effective discharge of their duties to the Virginia Academy of General Practice) and other routine matters of business will occupy the period of the social-business luncheon. Mrs. Homer Bartley of Roanoke is in charge of the Luncheon and Mrs. E. E. ("Scottie") Haddock, who was elected President of the Club last October, hopes that all wives of General Practitioners in the State of Virginia, who are eligible for membership in the VAGP, will attend the two-day Assembly in May, will be present at the Luncheon and will affiliate with the Club at this Session. The annual dues have been set at $2.00 per member and, with the confident assurance they can render their husbands and the VAGP a worth while service, it is hoped every GP's wife will have joined the group before the final adjournment of the Assembly.

H.P.S.

The Tri-State Medical Association of the Carolinas and Virginia

Was held at Roanoke, February 18 and 19 under the presidency of Dr. W. R. Wallace of Chester, S. C., and a most interesting program was enjoyed. Dr. James Asa Shield of Richmond succeeded to the presidency and the following officers were elected: President-elect, Dr. Grady Dixon of Ayden, N. C.; vice-presidents, Dr. Paul D. Camp, Richmond, Dr. J. K. Webb, Greenville, S. C., and Dr. A. Burke Suitt, Durham, N. C.; and secretary-treasurer, Dr. R. B. Davis, Greensboro, N. C.

Conference on Infectious Diseases.

The University of Virginia at Charlottesville will holds its third Postgraduate Conference on April 18, the subject being Infectious Diseases. The program will be in McKim Hall, Nursing School Auditorium, and will start at 9:00 a.m., with morning, afternoon and evening sessions. There will be two speakers in addition to members of the University staff—Dr. Harrison F. Flippin, associate professor of Clinical Medicine at the University of Pennsylvania, and Dr. George T. Harrell, Jr., Professor of Medicine at

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Bowman Gray School of Medicine, Winston-Salem, North Carolina.

Dr. John A. Martin,

Formerly of Salisbury, N. C., is now associated with Drs. Peterson, Barker and Smith in the practice of Radiology in Roanoke, Virginia. Dr. Martin, a graduate of Jefferson Medical College, served with the Army in the Pacific. Later he completed his Radiological Residency at Hartford Hospital, Hartford, Conn. with graduate training at Peter Bent Brigham Hospital in Boston under Dr. Merrill Sosman.

Tuberculosis — Diagnostic Standards and Classification of:

The ninth edition of the bulletin of the American Trudeau Society provides workable classifications for various phases of TB and simplifies the physician's task in keeping the records which are so necessary in recording the diagnosis, extent of disease, clinical and exercise status. It is available to physicians, free of charge, from their local tuberculosis associations, according to an announcement of the Virginia Tuberculosis Association.

The Virginia Chapter, American College of Chest Physicians,

Will present a scientific program at the Hotel Roanoke, during the afternoon of Wednesday, May 7, 1952.

The officers of the Chapter are: Dr. Dean B. Cole, Richmond; Dr. C. Lydon Harrell, Norfolk; Dr. Charles P. Cake, Arlington; Dr. R. Bryan Grinnan, Norfolk; Dr. M. Foscue Brock, Norfolk.

Dr. Virgil R. May, Jr.,

Of Richmond, became a diplomate of the American Board of Orthopaedic Surgery as of January 1952. He is a graduate of the Medical College of Virginia, class of December 1943, and is associated in practice with Drs. J. B. Dalton and Wm. Minor Deyerle.

News from Virginia Health Department.

Dr. James W. Fullerton has been appointed Health Officer of the Buchanan-Tazewell Health District, effective March 10, 1952.

Dr. C. T. Wilfong

Announces the opening of his office on March 15 at Lee Memorial Medical Building, 1805 Monument Avenue, Richmond. He will limit his practice to neurology and psychiatry.

American Congress of Physical Medicine.

The 30th annual scientific and clinical session of the Congress will be held on August 25, 26, 27, 28 and 29, 1952 inclusive, at The Roosevelt Hotel, New York, N. Y. All sessions will be open to members of the medical profession in good standing with the American Medical Association.

In addition to the scientific sessions, annual instruction seminars will be held. These lectures will be open to physicians as well as to therapists, who are registered with the American Registry of Physical Therapists or the American Occupational Therapy Association.

Full information may be obtained by writing to the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

1951 Supplement to Reviews of Medical Motion Pictures Now Available

The Committee on Medical Motion Pictures has completed the 1951 supplement to the second revised edition of the booklet entitled "Reviews of Medical Motion Pictures." This supplement contains 90 reviews of medical and health films reviewed in The Journal of the A.M.A. from January 1, 1951, through December 31, 1951. Each film has been indexed according to subject matter. The purpose of these reviews is to provide a brief description and an evaluation of motion pictures which are available to the medical profession.

Complimentary copies will be sent to county medical societies and other medical organizations upon request to Committee on Medical Motion Pictures, American Medical Association, 535 North Deaborn Street, Chicago, Illinois.

Prosthetists and Orthotists Service

A clearinghouse service on *competent, ethical* technicians specializing in braces, limbs, plastic eyes, or facial and body prostheses is being established. Qualified dentists doing obturator work or plastic eyes are included. Information will be available to *all* members of the medical profession on request.

Please assist this NEW service by forwarding names and addresses of qualified technicians and dentists to Academy-International of Medicine, 214 West Sixth St., Topeka, Kansas.

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Refresher Course.

A refresher course for medical technologists in Clinical Biochemistry is to be presented at Baylor University College of Medicine, Houston, Texas, by the Department of Biochemistry, August 18-23 inclusive. The plan of the course is lecture, laboratory, conference and demonstration in air conditioned building. Only qualified medical technologists should apply. Details may be secured from Dr. J. H. Gast, Department of Biochemistry, Baylor University College of Medicine, Houston 5, Texas.

Common Cold Conference

The Common Cold Foundation sponsored a conference on the common cold February 13 in Chicago, Illinois. This is probably the first common cold conference ever held in which men of industry, science and medicine discussed this complex disease. Dr. Thomas G. Ward, Associate Professor of Bacteriology at Johns Hopkins University, was guest speaker at the conference and his talk was followed by a panel discussion. More than fifty-five important industries in the Chicago area were represented by their medical directors, personnel, industrial and public relations officers, and industrial nurses.

The Common Cold Foundation is a non-profit, free enterprise and is incorporated under the laws of the State of Illinois. Its purpose is to create and disburse funds for use in developing research and investigation to the end that the common cold and its complications may be more adequately controlled, minimized, or eliminated from our national life.

The executive offices are at 112 East Chestnut Street, Chicago 11, Illinois.

Postgraduate Courses.

The Michael Reese Postgraduate School, Chicago, is offering the following one and two week postgraduate courses in April and May in "Surgery"; "Clinical Dermatology"; "Diseases of the Endocrines"; "Recent Advances in Internal Medicine"; and "Recent Advances in Pediatrics".

For full information, address Dr. Samuel Soskin, Dean, 29th Street and Ellis Avenue, Chicago 16, Illinois.

The Virginia Society of Opthalmology and Otolaryngology

Will hold its annual meeting at the Ingleside Hotel, Staunton, Saturday, May 3rd, starting at 9:00 a.m. An interesting program has been arranged and Virginia doctors are invited. Dr. Robert H. Courtney, Richmond, is president, and Dr. G. S. Fitz-Hugh, Charlottesville, is secretary-treasurer.

Gift to Arlington Hospital.

The Fairfax County Medical Society, at its March meeting, voted to turn over to the Arlington Hospital as a gift a Series F Government bond, par value $100.00, owned by the Fairfax Society, to be used toward the building fund for the hospital.

For Sale—

Monument Avenue, Richmond. Doctor's home-office suite of 5 rooms; detached. Southern exposure. Phone owner, 4-3053. (*Adv.*)

Wanted—

One Resident Physician, $225.00 per month, Two Rotating Interns, $150.00 per month, 117 bed general hospital, newly opened. Apply in writing, Administrator, Louise Obici Memorial Hospital, Suffolk, Virginia. Appointments will be available July 1, 1952. (*Adv.*)

For Rent—

Fully equipped office, with good supply of drugs, in splendid location for a doctor, in Grayson County near Fries, Galax, Independence and Ivanhoe, from which towns one may draw a large practice. The building is a new duplex-office and living quarters. Formerly owned by a doctor recently deceased. Address "Office" care this journal, 1105 West Franklin Street, Richmond 20, Va. (*Adv.*)

Wanted—

Associate physician (general practice); drawing account plus commission; rapid advancement; twenty miles from Richmond. Write P. O. Box 257, Providence Forge, Va. Phone 541. (*Adv.*)

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OBITUARIES

Resolutions on the Death of Dr. B. E. Harrell.

Dr. Bryant Eugene Harrell, prominent urologist, member, and past president of Norfolk County Medical Society died February 12, 1952.

Born in Chatham, Virginia, educated at Randolph-Macon Academy and College, he then spent four years as principal of various high schools, entering Johns Hopkins in 1910. His medical degree in 1914 was followed by two years of general surgery at Jefferson Hospital, Roanoke, and two years at Brady Urological Institute.

He served in the Army in World War I and on the Medical Advisory Board of the Selective Service System in World War II. He began the practice of urology in Norfolk in 1919, was on the Staff of the Norfolk Hospitals and consultant to Naval Hoshospital, Portsmouth, and belonged to a number of Societies.

WHEREAS, the Profession has sustained a great loss,

BE IT RESOLVED: that we, the members of the Norfolk County Medical Society extend to his family our deepest sympathy.

BE IT FURTHER RESOLVED: that these resolutions be recorded in the minutes and copies sent to the family and the *Virginia Medical Monthly*.

Committee:

FOY VANN, M.D.
J. WARREN WHITE, M.D.
ALLIE D. MORGAN, M.D., *Chairman*.

Dr. Harrell had been a member of The Medical Society of Virginia since 1920. He is survived by his wife and two sons.

Dr. John Catron Phipps,

Prominent physician of southwest Virginia, died February 2. He was sixty-four years of age and a graduate of the Medical College of Virginia in 1916. About two years ago he retired as company physician for the Washington Mills Company, a position he had held since 1924, but maintained an office at his home for private practice and looked after his farm. He served for a time in the Virginia General Assembly and from December 1940 to March 1947 served as a medical examiner for the Selective Service Board for his county. He had been a member of The Medical Society of Virginia for a number of years. His wife and two sons survive him. A brother was Dr. Wayne Phipps of Hopewell.

Dr. William Irvine Owens,

Well known physician of Pulaski, died at a Roanoke Hospital, February 23. He was a graduate of the Medical College of Virginia in 1923, and had been a member of The Medical Society of Virginia since January 1927. His wife, a son and daughter survive him.

Dr. Ernest Rutledge Martin

Of Newport News died January 17 in a local hospital, after having been in bad health for some years. He was seventy-five years of age and a graduate of the Medical College of Virginia in 1899. He was formerly a member of The Medical Society of Virginia. His wife survives him.